Final REPORT ON

ALIGNMENT OF NATIONAL FISHERIES AND AQUACULTURE STRATEGIES AND THE NATIONAL AGRICULTURAL INVESTMENT PLANS TO THE POLICY FRAMEWORK AND REFORM STRATEGY FOR FISHERIES AND AQUACULTURE IN AFRICA AND CLIMATE-CHANGE ADAPTATION INCLUDING FORMULATION OF RECOMMENDATIONS FOR DOMESTICATION OF RELEVANT GLOBAL INSTRUMENTS – LIBYA

Prepared by:
Dr Masauda Abuarosha – Omar Al-Mokhtar University
National Consultant

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Exclusive Summary:

This report provides a comprehensive assessment of Libya's national fisheries and aquaculture policy and its alignment with the African Union's *Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa*. Despite Libya's significant marine resources and extensive Mediterranean coastline, the sector remains underdeveloped. The report identifies major policy gaps, institutional weaknesses, and underutilized opportunities hindering progress. The analysis examines Libya's legal, institutional, and policy frameworks against the eight core policy areas outlined in the PFRS. It also evaluates the extent to which national strategies align with regional and international commitments. Insights were informed by stakeholder consultations, including surveys and interviews with representatives from government, academia, and the private sector.

Key Findings:

- Libya lacks a unified, up-to-date national fisheries and aquaculture strategy.
- The primary legal framework (e.g., Law No. 14 of 1989) is outdated and does not reflect global or continental best practices.
- While the *National Project of Aquaculture (NPA)* has introduced some procedural reforms, there is no standalone aquaculture law, no formal value chain strategy for small-scale fishers, and limited alignment with regional trade protocols.
- National strategies do not reference the PFRS, and there is limited integration of ecosystem-based management and co-management approaches.
- Institutional structures are fragmented, with overlapping mandates among ministries and agencies. Libya lacks an accredited training system, research coordination is weak, and participation in international forums and Regional Fisheries Management Organizations (RFMOs) is minimal.
- Libya's current fisheries and aquaculture regulatory environment reflects a foundational commitment to international cooperation, as demonstrated by its ratification of key global agreements such as UNCLOS, CBD, PSMA, MARPOL, and the Barcelona Convention. However, alignment with broader regional and global frameworks, particularly the African Union's *Policy Framework and Reform Strategy (PFRS)*, remains partial and fragmented.
- The domestication and implementation of ratified instruments are hampered by outdated legislation, institutional fragmentation, and limited technical capacity. Several important conventions remain unratified or insufficiently integrated into national frameworks, including the UN Fish Stocks Agreement (UNFSA), the BBNJ Treaty, the Nagoya Protocol,

and key ILO maritime labor conventions. This limits Libya's access to international support, market opportunities, and sustainability mechanisms.

- Climate adaptation remains a critical blind spot. Fisheries and aquaculture are absent from Libya's Nationally Determined Contributions (NDCs) and broader national climate adaptation frameworks. Threats such as sea-level rise, water scarcity, and coastal erosion remain unaddressed. There are no early warning systems, limited awareness among stakeholders of climate-related risks, and poor integration of fisheries into climate resilience planning.

In general, Libya has a strong natural foundation to build a sustainable and resilient blue economy. However, achieving this potential requires comprehensive policy reforms, stronger institutional coordination, and the integration of fisheries and aquaculture into national investment and climate agendas. With targeted action and enhanced regional cooperation, Libya can align its strategies with the PFRS, attract investment, and contribute meaningfully to Africa's Blue Economy vision.

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This report was prepared within the framework of the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) assessment for Libya. I would like to express my deep appreciation to the African Union – Inter-African Bureau for Animal Resources (AU-IBAR) for entrusting me with this important responsibility and for their continuous guidance and encouragement throughout the assessment process.

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Prof. Masauda Abuarosha
Faculty of Agriculture
Omer Almokhtar University
National Hub for Libya
WestMED initiative for Blue Economy
Masauda.Abuarosha@omu.edu.ly
libya@westmed-initiative.ec.europa.eu
2025

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List of Acronyms

- **ABES** – Africa Blue Economy Strategy
- **AU** – African Union
- **AU-IBAR** – African Union Inter-African Bureau for Animal Resources
- **BBNJ** – Biodiversity Beyond National Jurisdiction
- **BMZ** – Federal Ministry for Economic Cooperation and Development (Germany)
- **CAADP** – Comprehensive Africa Agriculture Development Programme
- **CASEP** – Climate Action in the Southern and Eastern Mediterranean
- **CCRF** – Code of Conduct for Responsible Fisheries
- **COMESA** – Common Market for Eastern and Southern Africa
- **EEZ** – Exclusive Economic Zone
- **EAF** – Ecosystem Approach to Fisheries
- **EAA** – Ecosystem Approach to Aquaculture
- **FAO** – Food and Agriculture Organization of the United Nations
- **FPIs** – Fishery Performance Indicators
- **GAMW**- General Authority of Marine Wealth
- **GCF** – Green Climate Fund
- **GFCM** – General Fisheries Commission for the Mediterranean
- **ICCAT** – International Commission for the Conservation of Atlantic Tunas
- **ILO** – International Labor Organization
- **IUU** – Illegal, Unreported, and Unregulated (fishing)
- **LME** – Large Marine Ecosystem
- **MBRC** – Marine Biology Research Centre
- **MCS** – Monitoring, Control, and Surveillance
- **MMW**- Ministry of Marine Wealth
- **MPA** – Marine Protected Area
- **MSP** – Marine Spatial Planning
- **NAIP** – National Agricultural Investment Plan
- **NAP** – National Adaptation Plan
- **NAPA** – National Adaptation Programme of Action
- **NBSAP** – National Biodiversity Strategy and Action Plan
- **NCCC** – National Climate Change Committee
- **NCFDC** – National Center for Food and Drug Control
- **NDC** – Nationally Determined Contribution
- **NGO** – Non-Governmental Organization
- **NPA** – National Project of Aquaculture
- **PFRS** – Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa
- **PPP** – Public-Private Partnership
- **PSMA** – Port State Measures Agreement

- **RAS** – Recirculating Aquaculture System
- **RECs** – Regional Economic Communities
- **RFBs** – Regional Fisheries Bodies
- **SDGs** – Sustainable Development Goals
- **SECCAR** – Sustainable Energy and Climate Change in the Arab Region
- **SMEs** – Small and Medium Enterprises
- **SSF – Small-Scale Fisheries**
- **UNCLOS** – United Nations Convention on the Law of the Sea
- **UNDP** – United Nations Development Programme
- **UNFCCC** – United Nations Framework Convention on Climate Change
- **UNFSA** – United Nations Fish Stocks Agreement
- **VNR** – Voluntary National Review
- **VG-SSF** – Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries
- **WEF** – World Economic Forum
- **WFP** – World Food Programme
- **WestMED** – Western Mediterranean Initiative

Chapter 1: Country Background and Over View of Fisheries and Aquaculture Sector in Libya

1.1. General background:

It is essential to first review key background information about Libya, including its geography, climate, population, and institutional structures, all of which have influenced the country's ability to fully capitalize on its abundant natural resources, particularly fisheries. This foundational understanding provides a critical framework for developing effective strategies to reform the governance of Libya's fisheries and aquaculture sectors. By doing so, we can contribute to the sustainable development of the marine wealth sector, promote food security, and drive economic growth.

Figure (1) Libya's location and map

Libya, located in North Africa along the Mediterranean, covers a total area of 1,759,540 square kilometers. Its northern coast stretches approximately 1,900 kilometers along the Mediterranean

Sea, with the Libyan economic waters spanning 364,696 square kilometers (World Bank Group, 2022)[1]. The General Authority for the Environment identified four distinct types of terrain in Libya:

- **Coastal Plains**: These plains run along the coastline, varying in width from 5 to 25 kilometers, and extending up to 100 kilometers in the western part of the country, forming the Jefara Plain.
- **Mountains**: Libya has two primary mountainous regions surrounded by verdant plateaus—the Nafusa Mountains in the northwest and the Green Mountain in the northeast. Both mountain ranges rise to heights of up to 1,000 meters and feature narrow, steep valleys descending toward the coast. Additionally, there is a southern mountain range, with Mount Tibesti being the most prominent in the southern desert.
- **Semi-Desert Terrain**: This transitional zone lies between the mountainous regions and the vast desert to the south. It serves as a buffer between the more habitable highlands and the harsher desert environment.
- **The Great Desert**: Covering over 90% of Libya's landmass, this terrain includes a mix of sandy, rocky, and volcanic deserts, characterizing the majority of the country's landscape.

Libya's climate can be classified into three main types:

- **Mediterranean Climate**: Found along the northern coast, it is characterized by hot, dry summers and mild, relatively humid winters.
- **Highland Climate**: In the Nafusa Mountains and the Green Mountain, summers are warm, winters are cold, and rainfall is more frequent, with occasional snowfall in higher elevations.
- **Desert Climate**: Dominating the southern regions, this climate is marked by extreme heat, large temperature fluctuations, and sparse, irregular rainfall, which diminishes further south until it nearly disappears in the most arid areas.

Libya's climate plays a significant role in shaping the spatial distribution of its population and influencing internal migration patterns. Libya's population was estimated at approximately 7.22 million in 2022, with 76.8% residing in urban areas (UN, 2022)[2]. Many people continue to migrate from rural to urban areas, seeking better-paying jobs and improved services. This internal migration is further driven by the unequal distribution of wealth and development programs across regions. The concentration of the population, both Libyan and non-Libyan, in urban areas,

[1] World Bank Group. (2022). Libya Overview. Retrieved from https://www.worldbank.org/en/country/libya/overview
[2] United Nations, Department of Economic and Social Affairs, Population Division. (2022). *World Population Prospects 2022: Online Edition*. Retrieved from https://population.un.org/wpp/

combined with rising living standards, has led to a continuous increase in the demand for goods and food. However, the local productive sectors have not expanded quickly enough to meet this growing demand, resulting in a steady rise in total imports to the Libyan market, primarily financed by oil revenues.

1.2. Overview of the Libyan economy

Libya is considered an upper middle-income country, with one of the highest per capita GDPs in Africa, thanks primarily to its substantial oil resources. It is generally classified as a developing country, sharing many characteristics typical of such economies. These include low productivity in the private sector, a limited domestic market, dependency on global markets, and underdeveloped infrastructure. However, as an oil-producing nation, Libya stands out with a high national income largely driven by its oil exports rather than by productivity in non-oil sectors. Libya's economy remains heavily reliant on the oil and gas sector, which continues to dominate its economic landscape. In 2022 oil and gas exports make up 95% of the country's exports, contribute over 90% of fiscal revenues, and account for 60% of the national GDP (IMF, 2023)[1]. This heavy reliance on oil revenue means that discussions about economic development in Libya must be framed within the context of oil-dependent economies, where substantial financial resources are invested in employment and development initiatives, yet tangible progress and indicators of sustained development remain limited.

Historically; since gaining independence in the early 1950s up to date, Libya has consistently pursued various development goals, one which is to achieve meaningful economic growth beyond the oil sector. The development non-oil sectors, such as agriculture, fisheries, manufacturing etc., remains crucial to achieving long-term, sustainable growth and reducing the country's economic dependency on oil. Improving infrastructure, governance, and institutional capacity are also essential to supporting such diversification efforts and building a resilient economy that can better serve the needs of its population. On the other hand, Libya's economy was centrally managed, with the state playing a dominant role in controlling various sectors. However, the economy has faced numerous challenges, particularly during the 1990s, when international sanctions were imposed on Libya. These sanctions had a significant negative impact on the country's economic performance. Following the lifting of sanctions in 2003, the Libyan government undertook a series of economic reforms aimed at revitalizing the economy and strengthening the role of the private

[1] International Monetary Fund. Middle East and Central Asia Dept. (2023). Libya: 2023 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for Libya. Volume 2023: Issue 201

sector. Among the key measures were reduction of interest rates to encourage the private sector to seek loans and stimulate domestic investment. Also encouraging private investment, both local and foreign private investment, to diversify the economy beyond oil.

These reforms were intended to modernize the economy and transition away from its heavily state-controlled structure. But Libya's previous socialist economic model, implemented since 1970s, left behind numerous structural issues. The focus on socialist transformation led to the accumulation of economic inefficiencies and created a state of dependency for the majority of the population, and many of state-owned companies failed to operate successfully based on standard economic criteria, contributing to the stagnation of economic activity. However, following the political disruptions caused by the 2011 uprising, Libya's economy saw a significant decline. but since 2017, the economy has shown signs of recovery, particularly due to increased oil production and exports. In 2017, real GDP growth surged to an estimated 28.3%, reflecting a recovery in oil output and improvements in political stability at that time. The positive economic momentum has continued in recent years, though the country still faces significant challenges. In 2023, Libya experienced a strong economic recovery, with GDP growing by 12.6%, following a recession in 2022. This growth was largely fueled by sustained oil production, which became possible due to an improved security situation in the country (AEO, 2024)[1]. On the demand side, economic growth in 2023 was primarily driven by two key factors; increased domestic spending played a crucial role in supporting economic growth. As Libya emerged from the recession, household consumption rebounded, contributing to overall economic activity. Also Libya's oil exports remained a vital source of revenue, with global demand for energy resources sustaining export levels and boosting the national economy.

Inflation in Libya dropped to 2.4% in 2023, reflecting improvements in domestic supply chains. The recovery and stabilization of supply networks, along with increased availability of goods and services, helped reduce inflationary pressures that had been a challenge in previous years. This drop in inflation benefited consumers by improving their purchasing power, further supporting the growth in private consumption. Libya's economic performance since 2023 highlights the country's continued reliance on oil and gas as the primary drivers of growth. The recovery in oil production, bolstered by an improved security environment, helped boost GDP and stabilize inflation. While the country continues to face structural challenges, the 2023 economic rebound demonstrates the crucial role that security and stability play in ensuring sustainable growth, particularly in an economy so deeply tied to the energy sector.

[1] African Development Bank Group. (2024). *Libya Economic Outlook*. Retrieved from

1.3. Overview on fisheries and aquaculture Sector

The Mediterranean Sea is a semi-enclosed marine basin known for its relatively low fish productivity. Fish production from the Mediterranean accounts for only 2% of the global marine catch (FAO, 2020)[1]. The waters of the Mediterranean are nutrient-poor due to a lack of significant rivers that bring essential materials like plant and animal plankton into the marine environment. Plankton is crucial for supporting fish growth and reproduction, and the scarcity of this resource has a direct impact on the overall productivity of the sea. Fish production within the Mediterranean is not evenly distributed.

Libya is one of the least productive countries in the Mediterranean basin in terms of fish production, even though numerous studies have shown that its waters, particularly along the western coast, are among the most productive in the Mediterranean. The flat continental shelf along the Libyan coast spans 55,000 km², with depths ranging between 100 and 200 meters, and in some places reaching 400 meters (ICJ, 1982)[2].Additionally, seasonal southern winds bring organic materials and nutrient-rich salts, while northern winds drive currents that pump relatively nutrient-rich deep waters to the surface. These favorable conditions are creating an environment conducive to fish growth, and providing a diverse range of marine species, including sardines, tuna, shrimp, and various types of mollusks. Despite this abundance, the sector has not reached its full potential, with annual fish landings estimated at no more than 45,000 metric tons. When comparing Libya's fish production with neighboring Arab countries, namely: Tunisia, Egypt, Algeria, and Morocco, Libya ranks the lowest, despite having similar natural resources and capabilities. These countries have more successfully developed their fisheries sectors, whereas Libya has not yet fully tapped into its potential or entered into competitive production levels. According to statistics from the Arab Organization for Agricultural Development, Libya is in a relatively favorable position in terms of infrastructure and resources. The following points highlight Libya's comparative standing:

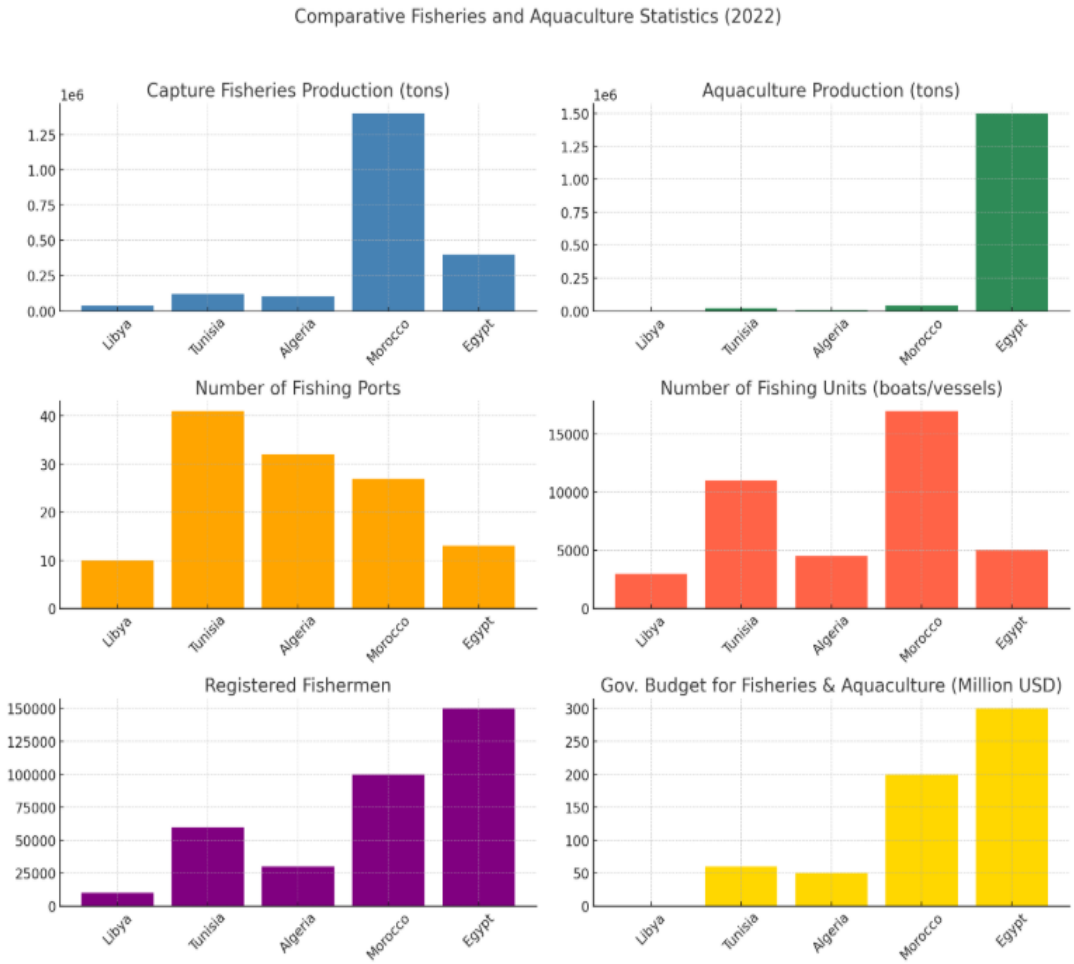
a) **Fishing Ports and Landing Sites:** Libya ranks second in terms of the number of fishing ports and landing sites, which should support higher production.
b) **Coastline Length:** Libya has the third longest coastline among the neighboring countries, providing extensive access to marine resources.
c) **Fishing Fleet Size:** Libya ranks fourth in terms of the size of its fishing fleet, indicating room for improvement in fleet capacity and modernization.

[1] FAO. The State of World Fisheries and Aquaculture 2020. Sustainability in action. Rome, FAO. 2020.
[2] Continental Shelf (Tunis. v. Libya), 1982 I.C.J. 18 (Feb. 24)

d) **Fishermen:** Libya ranks last in terms of the number of fishermen employed in the sector.

Despite these figures Libya still ranks last in terms of fish production. The fisheries sector in Libya is primarily artisanal, with small-scale fishermen using traditional methods to harvest marine resources.

Figure (2) Comparative Analysis with Neighboring Countries[1]



Source: AOAD. Fishery statistics' yearly book. (several issues). https://www.aoad.org/AASY-Fish.htm

Fishing activity is concentrated in coastal regions, with the main large scale ports located in Tripoli and Benghazi. The sector's infrastructure, however, is underdeveloped, with limited access to modern fishing vessels, cold storage facilities, and processing plants. As a result, the contribution

[1] Note: Libya's budget data for fisheries/aquaculture is not publicly detailed, but investment remains limited compared to regional peers. All figures are approximations based on the AOAD statistics of 2022.

of fisheries to the national economy remains minimal, despite the vast marine potential. Libya's fishing sector contributes approximately 9% to the country's agricultural GDP, where the country's agricultural contribution to the GDP was1.2% (FAO, 2005). According to the (FAO, 2020)[1], Libya's per capita fish consumption rose from approximately 6 kg in 2007 to about 14.73 kg in 2020. This figure remains below the global average of 20.5 kg per capita per year as of 2019.

The economic resources of marine resources sector can be categorized into human, capital, and natural resources, each of which plays a critical role in shaping the overall productivity of fishery and aquaculture:

1.4. Natural resources

1.4.1. **Natural Fisheries:**

Libya boasts one of the longest coastlines along the Mediterranean Sea, yet its fisheries remain underexploited. The FAO notes that no comprehensive survey has been conducted to assess the full extent of Libya's fish stocks. Most fishing activity occurs in shallow coastal waters, leaving the deeper waters, which are rich in white fish, tuna, bottom fish, and mollusks, largely unexploited. The western region, in particular, is nearing full exploitation, and the potential for further dredging or boat activity is limited. In 1997, the available fish resources were estimated at 34,100 tons per year, and by 2008, these resources were approaching full utilization. The Supreme Planning Council's 2003 report recommended that future fishing efforts should focus on deeper waters that are still rich in unexploited marine life. In regarding to the fish stock assessment; technical surveys to accurately estimate fish stocks in Libyan territorial waters remain incomplete. However, The Soqriya Company's 1977 assessment estimated that approximately 14,022.5 tons of fish could be harvested annually from Libya's western coast, at depths ranging from 0 to 400 meters. However, actual fish production during the 1970s and 1980s averaged around 4,600 tons per year, primarily due to the lack of fishing fleets. A 1995 FAO report[2] provides more recent data on fish stocks in Libyan waters. These surveys also have revealed extensive sponge beds of high quality, particularly in regions that appear to have been unexploited for a significant period (figure 3). Key areas include the Gulf of Sirte between Benghazi and Misurata, the eastern region

[1] Food and Agriculture Organization of the United Nations (FAO). (2020). *Food Balance Sheets*. Retrieved from https://www.fao.org/faostat/en/#data/FBS

[2] Lamboeuf, M., Ben Abdallah, A., Zgozi, S., Nafati, A., Mer, A., & Abdubari, A. (1995). *Libyan Marine Resource Assessment: Trawl Survey Results 1993–1994*. FAO Technical Briefing Notes No. 26. Tripoli–Rome

between Qaminis and the Gulf of Bardia and the western region between Misurata and the Gulf of Gabes (Instrupa, 1975)[1].

Figure (3) harvested sponge from Libya waters

Source: from the face book page of the Libyan Society of Marine Sciences[2]

In 1993–1994, the research vessel Noor completed six trips to assess fish stocks along the Libyan coast, collecting data on benthic species from the Egyptian to Tunisian borders under the Marine Biology Research Center. A 1995 FAO report updated data on fish stocks in Libyan waters; Acoustic surveys conducted in 1995 estimated the biomass of small pelagic species at 56,500 tons, with the majority located in the Tripoli and Gulf areas, and about 7% in the Al-Jajbal Akhadar area. These species included Trachurus trachurus, Sardinella aurita, and Scomber japonicus. The abundance of demersal species was estimated to be between 27,800 and 39,000 tons, depending on the season.

Between 2008 and 2010, comprehensive marine surveys were conducted in Libyan territorial waters through a collaboration between the FAO MedSudMed project, the Italian National Research Council (CNR-IAMC), and (MBRC). These surveys aimed to assess the abundance and distribution of small pelagic fish species, such as anchovy (*Engraulis encrasicolus*) and round

[1] Instrupa. (1975). *Final Report on Results of Test Fishing Program, Gulf of Sirte, Libyan Arab Republic*.
[2] https://www.facebook.com/profile.php?id=100064389383925

sardinella (*Sardinella aurita*), and to understand the oceanographic processes influencing their populations. The 2010 survey, MedSudMed-10, also utilized the R/V *Urania* and concentrating on the eastern Libyan continental shelf. These studies provided valuable data on fish egg and larval distributions, as well as environmental parameters like water temperature, salinity, and nutrient concentrations and estimated the annual fish stock available for fishing at approximately 50,000 to 70,000 tons, comprising various species (FAO, 2010)[1].

1.4.2. Aquaculture:

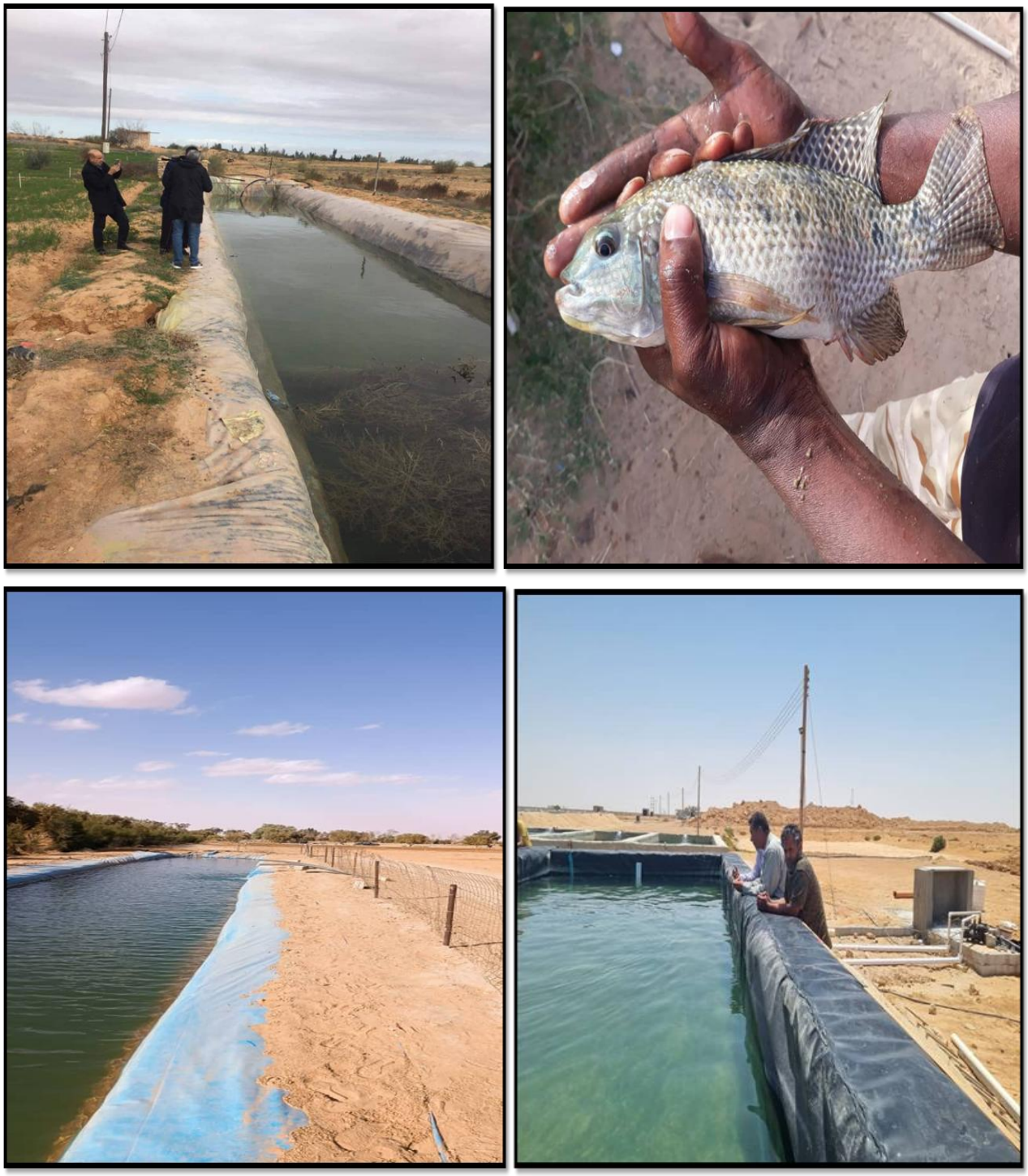
Aquaculture, or fish farming, presents a significant opportunity for Libya to diversify its economy and increase its food security. The country's long coastline, favorable climatic conditions, and extensive inland water resources make it well-suited for both marine and freshwater aquacultures. However, despite this potential, aquaculture remains in its infancy in Libya, with very few commercial fish farming operations currently active. Fish farming in Libya began in the 1970s with a focus on freshwater species, utilizing water sources like springs and dams, such as Ain Kaam and the Kaam and Wadi Al-Majinin dams. Due to Libya's scarcity of natural freshwater resources, medium-density fish farms were introduced, with species like sea bream imported from China and various types of catfish. In 1990, the Nile tilapia was also introduced for farming, although local demand for this freshwater species was lower compared to marine fish.

Libya's fish farming extended beyond freshwater species to include saltwater species, with several key locations playing an essential role in this transition. First fish farm with large scale was Ain Ghazala near Tobruk which became hubs for saltwater fish farming, focusing on species such as sea bass, sea bream, mullet, and eels. Ain Ghazala also experimented with some types of shellfish. One of the most advanced developments in Libyan aquaculture occurred in the early 2000s, when floating and submersible cages were introduced at the Ras Al-Hilal farm, where sea bass was raised. Also in 2004, an integrated fish farm and hatchery for sea bass was established in the Farwa area near the Tunisian border. These projects significantly boosted the country's fish farming capacity. Production from these farms, particularly focusing on sea bass and sea bream, was reported by the FAO reaching approximately 230 tons. Unfortunately, after the political events of 2011, most fish farming activities ceased, with the exception of a few small private farms, whose

[1] FAO MedSudMed. (2010). *Oceanographic Survey MedSudMed-08: Central Part of Libyan Waters*. Retrieved from https://openknowledge.fao.org/server/api/core/bitstreams/280eb529-8c9d-49dc-8c38-826ef2dcacc4/contentopenknowledge.fao.org
FAO MedSudMed. (2010). *Oceanographic Survey MedSudMed-10: Eastern Part of Libyan Waters*. Retrieved from https://www.faomedsudmed.org/pdf/surveys/2010_July_Oceanog_Ichthyo_Survey.pdf

combined production remains minimal, not exceeding 50 tons annually. According to latest data from the NPA 2022 the number of private fish farms not exceed 80 small scale fish farm.

Figure (4) site visits of NPA to private fish farms 2023-2024



This historical evolution of fish farming in Libya highlights both the sector's potential and the challenges it faces, particularly in scaling up production and adapting to the political and economic instability. The development of aquaculture in Libya faces several challenges. First, the sector suffers from a lack of expertise and technical know-how, as well as insufficient access to specialized equipment and supplies. Despite these obstacles, there are positive signs of progress. International organizations such as (AU-IBAR) and (FAO) have been working with Libyan authorities to develop strategies for sustainable fisheries and aquaculture growth. These initiatives focus on building capacity, improving regulatory frameworks, and encouraging investment in modern aquaculture practices.

However, in recent years, particularly following the reactivation of the National Project for Aquaculture (NPA) in 2021 under the General Authority for Marine Wealth, Libya has begun to formulate a clearer strategic direction for the sector. The NPA developed a national aquaculture development plan, outlining objectives to improve governance, licensing systems, environmental safeguards, and technical training. In 2022, the NPA issued a practical handbook for aquaculture operations, including regulatory forms, responsible practices, and environmental considerations, a step toward formalizing the sector's legal and institutional framework. Also the NPA currently is working on data base for the aquaculture in Libya including the number of farms, production, type of aquatic animals, type of farming system.

1.5. Human resources

Libya's marine fishing sector is heavily reliant on foreign labor. Since the 1960s, when oil was discovered, Libyan workers began to leave the agricultural and fishing sectors in favor of better-paying jobs with less physical effort. This trend led to a significant reduction in the local workforce for the marine wealth sector, fishing sector employs less than 0.0025% of Libya's population (Khalfallah et al., 2015) [1]. Fishing activities in Libya are relatively limited, with most fish products consumed domestically. According to statistics from the General Authority for Information (2008)[2], 13,344 out of the total workforce of 17,920 in the fishing sector were foreign fishermen, accounting for 74.5% of the total workforce.

1.6. Capital resources

[1] Khalfallah, Myriam, Belhabib, Dyhia, Zeller, Dirk and, Pauly, Daniel (2015). Reconstruction of Marine Fisheries catches for Libya (1950-2010). Working paper Series (47). Fisheries Centre the University of British Columbia. BC, V6T 1Z4, Canada
[2] General Authority for Information (2008) Statistic Book. Yearly Bulletin

Capital investment is a cornerstone of sustainable development in the fisheries and aquaculture sector. It enables the modernization of fishing fleets, the adoption of advanced technologies, and the development of aquaculture infrastructure such as hatcheries, fish farms, ports, ice plants, and processing facilities. In Libya, however, capital resources dedicated to the marine wealth sector remain limited and inconsistently allocated despite the country's vast marine potential.

Public Investment: General and transition budgets from 1970 to 2010, the Libyan government allocated approximately 518.9 million Libyan dinars (LYD) to the marine wealth sector. This amount represented just 0.44% of the total transitional development budget over that period, underscoring the sector's historically low prioritization within national economic planning frameworks. Although Libya possesses a coastline stretching over 1,900 kilometers and one of the largest continental shelves in the Mediterranean, public funding has not kept pace with the sector's developmental needs.

Loans and Credit Facilities: In an effort to stimulate private sector participation, the government previously encouraged access to credit through specialized financial institutions. These included the Agricultural Bank, the Rural Bank, the Production Transformation Fund, and the Development Bank. These loans were intended to support a range of activities such as:

- Acquisition of fishing vessels and gear
- Development of aquaculture farms
- Construction of storage and cold chain facilities
- Fish processing and packaging operations

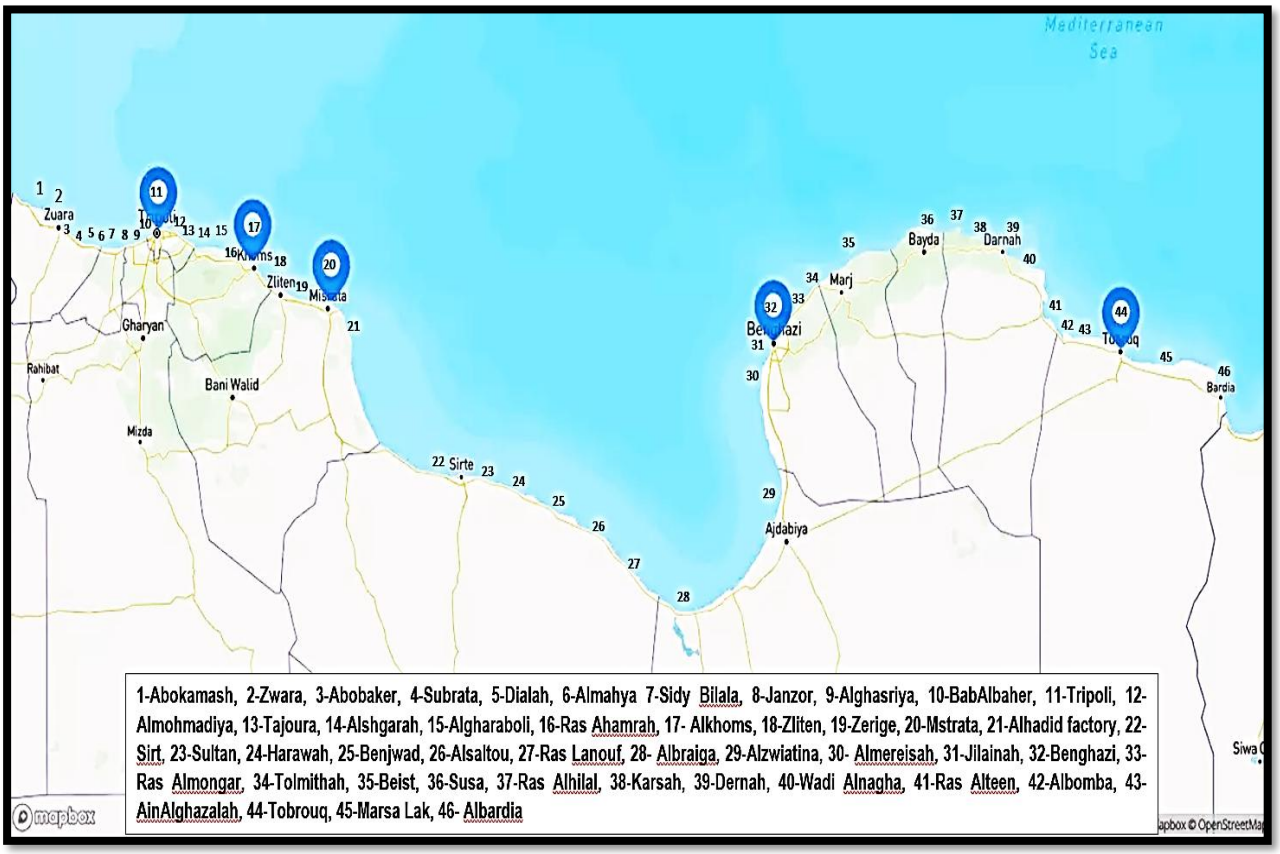
However, most of these institutions have become inactive or severely limited in their operations, particularly following the political and economic instability that emerged post-2011. Currently, only the Agricultural Bank remains nominally active, but it faces significant structural and financial challenges, including internal division and near insolvency. As a result, there are currently no effective lending mechanisms in place to finance the development of the marine wealth sector. The absence of dedicated financing instruments, such as aquaculture-specific guarantee funds, insurance schemes, or targeted investment incentives, has left the sector largely dependent on fragmented public support and underfunded development initiatives.

1.7. Infrastructure:

Fishing operations in Libya are largely carried out by artisanal fishing boats equipped with nets, hooks, and lampara boats. A 1996 FAO report indicated that these boats were distributed across

135 fishing landing site and fishing ports, with 55% of the fishing fleet concentrated in the western region, 23% in the Gulf of Sirte, and 22% in the eastern region between Benghazi and Tobruk. Out of these 135 points, 76 were permanent fishing ports, while 59 were seasonal. By 2009, the number of operational fishing landing site had decreased to 100 ports, including 46 permanent ports and 53 landing sites. These landing sites vary in size and infrastructure, from well-established ports with basic services to informal or seasonal points used by artisanal fishers. Strengthening these sites through improved cold chain systems, hygiene facilities, and monitoring mechanisms would enhance post-harvest value addition, ensure traceability, and improve livelihoods in coastal communities.

Figure (5) Key fishing ports and landing fishing points on the Libyan coast.



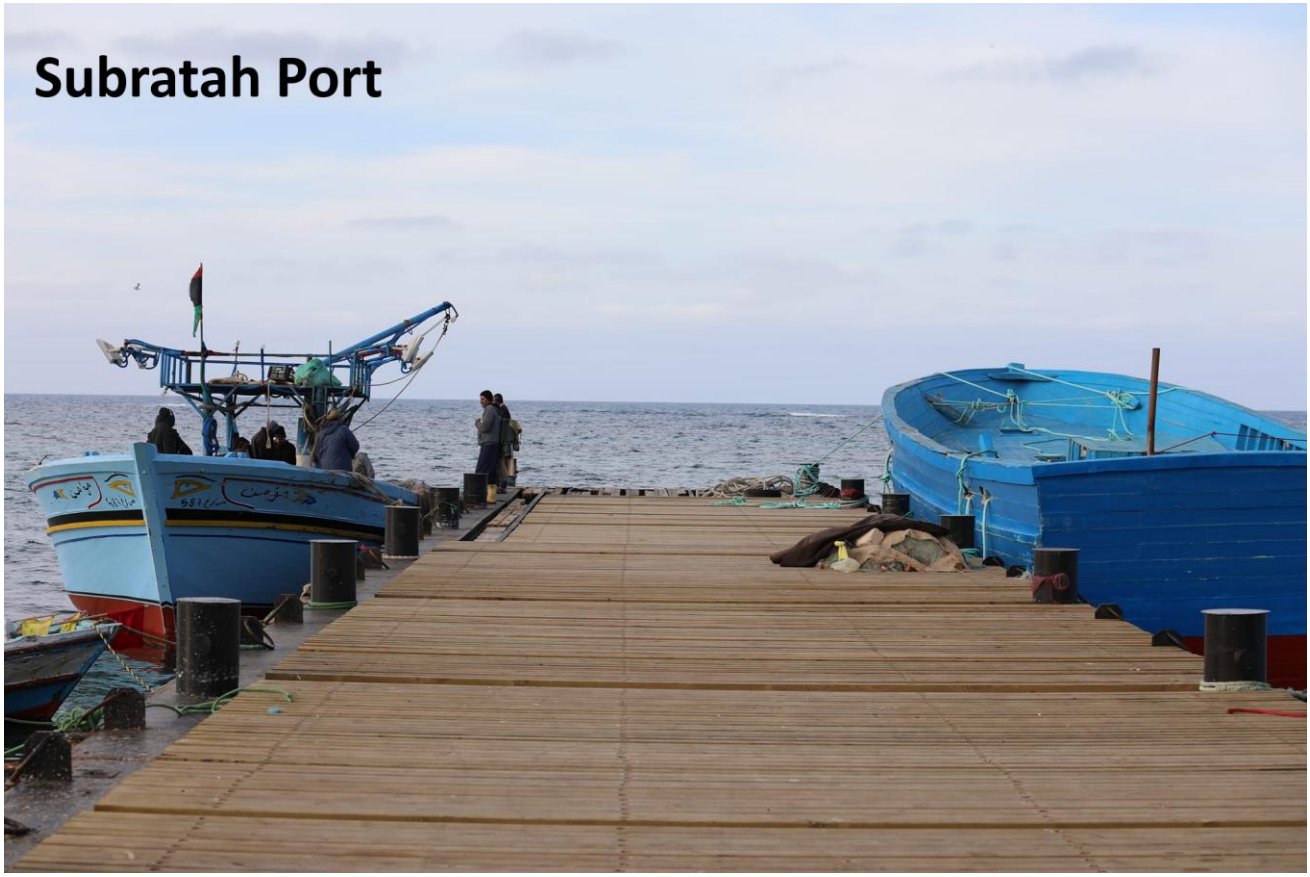
Sources: created by the consultant according to the report of the General Authority for Marine Resources (2015).

Since 2005, Libya began developing several ports dedicated to marine fisheries. Although progress came to a halt between 2011 and 2021 due to political instability, efforts to maintain, upgrade, and complete a number of these fishing ports have resumed in recent years. This renewed activity is a positive indication of Libya's commitment to revitalizing and developing its

marine fisheries sector. Here some images (was taken 2024- 2025) illustrate various fishing ports across the country.

Figure (6) Images of some fishing ports in Libya


Susa Port


Subratah Port


Alhamidya port
508
COAST GUAR


Tolmiatha Port

On the other Hand; A report by the General Authority for Marine Resources (2010)[1] showed that Libya had 4050 operating fishing units, ranging from boats (3742) and dredgers (256) to large ships (52). However, by 2023, this number had declined to 3,708 units (FAO, 2023)[2] ; This decrease reflects a combination of challenges facing Libya's fisheries sector. the political instability and economic uncertainty since 2011 have significantly disrupted investment, vessel maintenance, and the operation of fishing fleets. The aging nature of many vessels, coupled with a lack of financing mechanisms and government support, has resulted in the decommissioning of boats without replacement.

Table (1) Key Characteristics of Small-Scale Fisheries in Libya

Aspect	Description
Scale	Over 90% of Libya's fishing fleet is small-scale, consisting of artisanal wooden or fiberglass boats, often 5–12 meters in length.
Gear Used	Hand-lines, gillnets, trammel nets, longlines, traps. Few use modern sonar or mechanized equipment.
Operating Range	Typically, within 12 nautical miles from shore. Operations are usually day-based trips.
Target Species	Demersal and pelagic species:
Employment	Provides direct livelihoods to thousands of fishers, and indirectly supports fish processors, boat builders, vendors, and transporters.

Source: based on the data from General Authority of Marine Wealth (2016). Strategic Plan of the of General Authority Marine Wealth 2017-2022.

Libya has fish processing plants, though their capacity and infrastructure have been limited. Historically, the country has had some fish processing facilities, particularly in coastal areas where the fishing industry is more prominent. These plants typically focus on preserving and packaging fish products such as frozen fish, canned fish, and fish fillets. In recent years it is possible to recognize several leading companies in Fish processing, such as Tanara Fish Fishing and Canning Company, Libya Fish Company, Kona Fish Canning Company, Libyan Commercial Broker for Industrial Services, Libyan Fish Manufacturing and Canning Company and South Mediterranean Food Development Company. However, the sector faces challenges such as outdated technology, insufficient capacity, and limited investment. The development of the fish processing industry in Libya has been slow, and the country relies significantly on imported fish products due to a lack of modern processing facilities and a small-scale fishing industry compared to regional standards. Further investment and infrastructure development are needed to expand fish processing capabilities and meet both domestic and international demand.

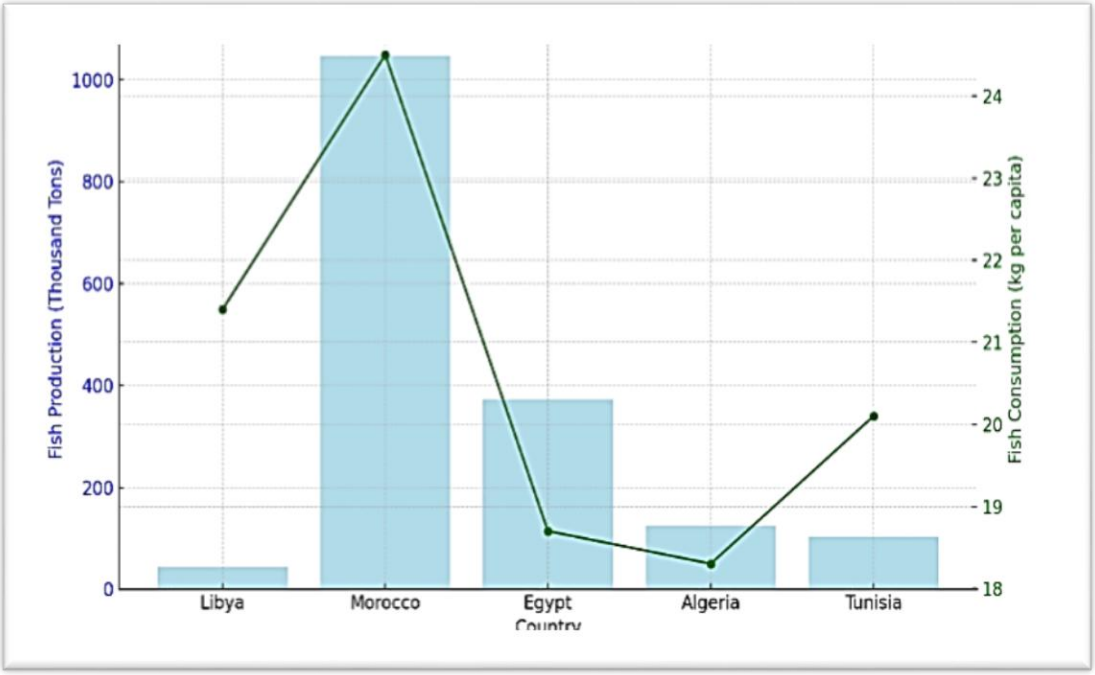
[1] General Authority for Marine Resources (2010). Activity report. (internal report). Tripoli. Libya
[2] FAO. (2023). The State of Mediterranean and Black Sea Fisheries 2023 – Special edition. General Fisheries Commission for the Mediterranean. Rome. https://doi.org/10.4060/cc8888en

1.8. Fish production and consumption:

Fish production globally is derived from two primary sources: natural marine capture and aquaculture. Marine capture involves harvesting fish that live naturally in bodies of water such as seas, rivers, and lakes. Aquaculture, on the other hand, involves the controlled cultivation of fish in either marine or freshwater environments. This can be done in open systems such as seas, rivers, and lakes, or in closed systems such as land-based tanks or ponds. In both systems, fish are raised under controlled conditions to maximize production.

According to the statistic of AOAD (2010-2023)[1] Libya's contribution to the total fish production among its neighboring Arab countries was only 3%, while Egypt, Morocco, Algeria, and Tunisia accounted for the remaining 97%. Morocco leads in fish production by a significant margin, followed by Egypt, Algeria, and Tunisia. Libya's production lags far behind, despite having many of the resources necessary to develop a more competitive fisheries sector.

Figure (7) The average of Fish production and consumption (2010-2023)



Sources: created by the consultant based on the AOAD statistics

[1] https://www.aoad.org/AASY-Fish.htm

Libya's fish production sector, despite its vast marine resources, remains largely underdeveloped and underexploited. Challenges such as insufficient infrastructure, reliance on foreign labor, and nutrient-poor waters have limited the sector's growth. However, there is significant potential for improvement, especially if the country invests in modernizing its fleets, expanding port facilities, and conducting comprehensive technical surveys to assess its marine resources. With proper development, the sector could contribute more meaningfully to Libya's economy and food security.

Libya has significant potential to develop its marine fisheries, given its long coastline, favorable fishing conditions, and infrastructure. However, its current production levels remain low, especially when compared to neighboring Arab countries with similar capabilities. Libya's underdeveloped fisheries sector stems from various factors, including insufficient utilization of its marine resources, underinvestment in the fishing fleet, and a lack of trained workforce. To improve its standing, Libya must invest in its fishing infrastructure, modernize its fleet, and better exploit its natural marine resources. With proper development, Libya could become a more competitive player in the Mediterranean fishing industry, contributing more significantly to regional fish production.

1.9. Conclusion:

Libya possesses significant natural advantages for the development of its fisheries and aquaculture sector, including an extensive Mediterranean coastline of approximately 1,900 kilometers and a sizable Exclusive Economic Zone (EEZ) of nearly 365,000 square kilometers. Despite these endowments, the sector remains underutilized and constrained by structural, institutional, and economic limitations. The country's fish production remains modest, with low per capita consumption and minimal contribution to the national GDP, particularly when compared to regional and international benchmarks.

The demographic context, marked by a predominantly urban population, presents both opportunities and challenges for the sector, particularly in terms of demand concentration, infrastructure distribution, and market access. Libya's economy, still heavily reliant on hydrocarbons, has yet to effectively integrate fisheries into its broader development framework. The current state of marine resource exploitation is largely artisanal, with limited aquaculture development, outdated infrastructure, and insufficient investment in post-harvest processing or cold-chain logistics.

Above all, it is imperative for Libya to implement a robust national strategy and investment plan to unlock the full potential of its fisheries and aquaculture sector. Although currently underexploited, the sector holds significant promise for food security, economic diversification,

and employment. Stimulating production and resource use must go hand in hand with sustainable practices to avoid the mistakes of overexploitation observed in other countries. Libya has a valuable opportunity to learn from international experiences and adopt best practices that balance development with conservation.

The country's diverse marine resources, including untapped sponge beds, abundant pelagic and demersal stocks, and a growing interest in aquaculture investment—highlight the potential for sustainable sectoral growth. To realize this potential, Libya must advance beyond fragmented efforts toward a coordinated, science-based approach to fisheries and aquaculture governance. This includes adopting ecosystem-based management, integrating climate change adaptation into policy and planning, and strengthening regional cooperation frameworks, particularly with Mediterranean partners.

Achieving these goals will require not only legal and institutional reform but also long-term capacity building, data-driven decision-making, and the mobilization of both public and private investments.

Chapter 2: Introduction to the Assignment

2.1. Introduction:

This report presents a comprehensive review of Libya's fisheries and aquaculture sector, focusing on its alignment with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) and other relevant global and continental instruments. Libya's fisheries and aquaculture sector remains underdeveloped despite its 1,900 km Mediterranean coastline and significant marine resources. The sector faces multiple challenges, including outdated legal frameworks, weak institutional capacity, limited private sector involvement, and a lack of investment in monitoring, surveillance, and climate adaptation strategies. However, with strategic reforms, Libya has the potential to unlock sustainable economic growth, enhance food security, and align with regional and international fisheries governance frameworks.

The African Union Inter-African Bureau for Animal Resources (AU-IBAR) plays a pivotal role in supporting the sustainable development of livestock, fisheries, aquaculture, and wildlife across African Union (AU) Member States. As a specialized technical office under the Department of Rural Economy and Agriculture (DREA) of the African Union Commission (AUC), AU-IBAR is committed to enhancing the contribution of these sectors to food security, economic prosperity, and regional integration. The AU-IBAR Strategic Plan (2018-2023) envisions an Africa where animal resources are key drivers of sustainable development, economic growth, and peace.

In the fisheries and aquaculture sector, AU-IBAR's efforts are guided by the Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa. First introduced following the recommendations of the Conference of African Ministers of Fisheries and Aquaculture (CAMFA I) and later reaffirmed at CAMFA II, the PFRS was officially endorsed at the June 2014 AU Summit in Malabo, Equatorial Guinea. This strategy serves as a blueprint for the sustainable development of Africa's fisheries and aquaculture sector, aiming to improve governance, food security, livelihoods, and economic opportunities.

Aligned with Agenda 2063, the Africa Blue Economy Strategy emphasizes an inclusive and sustainable blue economy that contributes to Africa's long-term socio-economic transformation. Building upon this vision, AU-IBAR launched FishGov2, the second phase of the FishGov initiative, with EU support. Officially titled "Enhancing Sustainable Fisheries Management and Aquaculture Development in Africa: A Programme for Accelerated Sector Reform," FishGov2 seeks to strengthen policy frameworks and regulatory environments to ensure effective governance of fisheries and aquaculture in AU Member States and Regional Economic Communities (RECs). It works toward aligning national policies with continental and global frameworks, ensuring coherence with the PFRS and the Africa Blue Economy Strategy while promoting sustainable fisheries and aquaculture management by addressing environmental,

economic, and social challenges. The initiative also fosters gender inclusivity, ensuring equal opportunities for women in the fisheries and aquaculture sector, and enhances regional collaboration and capacity-building efforts to support long-term sustainability and resilience.

This report provides an in-depth assessment of Libya's fisheries and aquaculture sector, evaluating its alignment with continental and global policy frameworks. It identifies gaps in governance and regulatory structures, explores key challenges and opportunities, and outlines recommendations for strengthening the sector's contribution to food security, livelihoods, and economic growth.

2.2. Scope of the assignment

This report focuses on evaluating Libya's fisheries and aquaculture governance framework, its alignment with the PFRS, and its preparedness for climate change adaptation. The scope includes:

a) **Policy and Regulatory Analysis:** Examining existing policies, legislation, and institutional arrangements governing Libya's fisheries and aquaculture sector.
b) **Alignment with PFRS and Global Instruments:** Assessing how Libya's policies correspond with continental and international frameworks.
c) **Climate Change Considerations:** Evaluating Libya's readiness to integrate climate resilience strategies into fisheries and aquaculture governance.
d) **Stakeholder Engagement and Institutional Capacity:** Analyzing the role of government institutions, private sector actors, NGOs, and research institutions in shaping the sector's policies and strategies.
e) **Recommendations and Reform Proposals:** Identifying key policy interventions, investment priorities, and regulatory updates required for sustainable sectoral growth.

2.3. Purpose

The primary purpose of this assignment is to:

- Evaluate Libya's current fisheries and aquaculture policies for alignment and coherence with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) and relevant international instruments.
- Support African Union Member States (AU-MS) to successfully develop and implement national fisheries and aquaculture sectoral strategies and National Agricultural Investment Plans (NAIPs) that are aligned to the Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa and climate change adaptation.

- Develop evidence-based policy recommendations that will enhance Libya's alignment with continental and global frameworks.
- Propose actionable strategies to strengthen governance, monitoring, and sectoral investments in fisheries and aquaculture.

2.4. Objectives

To achieve the above purpose, the following objectives are defined:

1. Assess the current status of Libya's fisheries and aquaculture sector, including its legal framework and institutional arrangements.
2. Analyze the alignment of Libya's national fisheries and aquaculture policies with the PFRS and other relevant international frameworks.
3. Identify critical challenges such as policy gaps, weak institutional capacity, limited funding, and market barriers affecting the sector's growth.
4. Evaluate climate change risks and adaptation strategies within Libya's fisheries and aquaculture sector.
5. Develop policy and investment recommendations to improve governance, sustainability, and economic viability of the sector.
6. Engage with key stakeholders, including government agencies, private sector actors, and NGOs, to ensure participatory and inclusive policy reforms.

2.5. Approach to the assignment

This assignment employs a **multi-method approach** combining policy analysis, stakeholder consultations, and comparative case studies. The approach consists of the following key steps:

2.5.1. Desk review

A comprehensive review of national fisheries policies, legislation, strategies, and investment plans was conducted. Additionally, relevant continental and global instruments (such as PFRS, AU-IBAR reports) was examined to assess Libya's alignment. This step includes:

a) Engagement with AU-IBAR publications

A comprehensive list of documents relevant to the assignment was received from AU-IBAR such as the following:

- A Guide for the Implementation of the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa, AU-IBAR 2015.
- The AU-IBAR strategic plan (2018-2023).

- Comprehensive Africa Agriculture Development Programme (CAADP)-BIENNIAL REVIEW REPORT 2015 – 2018.
- Online Survey to Monitor the Alignment of National and Regional Fisheries and Aquaculture Policies with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa
- Alignment of NAIPs and RAIPs to climate change and environmental management, Guidelines for the Assignment.

b) Comprehensive literature review

A comprehensive review of briefing documents, along with relevant materials sourced from the internet and unpublished government reports, was conducted to gain a thorough understanding of the scope of the assignment and its expected deliverables. Where applicable, these documents served as reference materials in carrying out the assignment. For online sources, a literature search was undertaken to gather relevant documents, which were then reviewed and synthesized using AI tools to extract key insights pertinent to the assignment. However, unpublished government reports and other related documents from the ministry of agriculture and the ministry of marine resources, and the ministry of environment provided valuable context and sector-specific data, further enhancing the depth and accuracy of the analysis. The relevant documents from these institutions were accessed through their official websites or obtained from authorized officials and were reviewed as part of the literature review process.

2.5.2. Stakeholder engagement:

Key stakeholders were engaged through:

a) Interviews: with key informant in (Ministry of Marine Resources, Ministry of agriculture, National Project of Aquaculture) (Appendix 3)
b) Survey: Framework to aid in the review of (Libya) fisheries and aquaculture policies and laws using the PFRS, regional instruments and global best practices as benchmarks.
c) Validation workshop: A four-days national workshop with relevant stakeholders, including Ministry of Marine Wealth, National Project of Aquaculture, Libyan Maritime cluster, High Institution of Marine Science and Technology among other experts from civil society, academia, and private sector representatives was organized with support from AU-IBAR. Presentations on key findings of the assessment were made and facilitated validation sessions were done to review and validate the findings, identify gaps, and gather feedback and consensus on the recommendations (Appendix 4).

2.6. Policy gap analysis

Using the PFRS implementation guide developed by AU-IBAR[1], Libya's policy and regulatory gaps was mapped, highlighting key areas that require reforms and capacity-building initiatives. Also an evaluation of how climate change is affecting Libya's marine resources and fisheries sector was conducted. SWOT analysis used to assess Libya's fisheries and aquaculture Strengths, Weaknesses, Opportunities, and Threats

2.7. Development of recommendations

Based on the findings, a comprehensive set of policy, regulatory, and investment recommendations was formulated. Actionable guidelines and mechanisms were developed to address identified gaps and support the integration of PFRS instruments into national policies and regulatory frameworks. These recommendations were refined through consultations with key stakeholders to ensure their relevance, broad acceptance, and effective implementation.

2.8. Expected outcome and final report:

By applying this structured approach, the assignment aims to provide Libya with a clear roadmap for improving its fisheries and aquaculture sector governance. The final recommendations will support:

- Sustainable fisheries management and policy coherence.
- Improved climate resilience strategies for the sector.
- Enhanced regional and global cooperation in fisheries governance.

[1] AU-IBAR (2023). Consultancy to review and align national fisheries and aquaculture policies and laws with PFRS, regional instruments and global best practices for 15 AU Member States. *Final Technical Report, Consultancy for African Union-InterAfrican Bureau of Animal Resources. 84 pp.*

Chapter 3 Alignment of Libya's Fisheries and Aquaculture Development Policies with The Policy Framework and Re-Form Strategy for African Fisheries and Aquaculture (PFRS)

3.1. Introduction:

The African Union Policy Framework and Reform Strategy for Fisheries and Aquaculture (PFRS) provides a comprehensive roadmap for the sustainable management of fisheries and aquaculture across the continent. Given Libya's rich marine resources, aligning national policies, regulatory frameworks, and strategic plans with the African Blue Economy Strategy (ABES), the PFRS, and relevant regional, continental, and international instruments is essential. This alignment will strengthen food security, drive economic growth, and ensure the sustainable management of fisheries resources, in line with the AU Malabo Declaration of 2014.

Libya's fisheries and aquaculture sector plays a crucial role in national food security, economic diversification, and coastal development. However, despite the country's vast marine resources, the sector remains underdeveloped due to weak regulatory enforcement, limited aquaculture expansion, and institutional fragmentation. Achieving policy alignment with the PFRS is key to fostering sustainable development, improving governance, and attracting investment in Libya's fisheries and aquaculture sector. This chapter evaluates Libya's national fisheries policies in relation to the PFRS, identifying policy gaps and priority areas for reform based on stakeholder consultations and document analysis.

3.2. Methodology:

The analysis of Libya's national fisheries and aquaculture policies was conducted through a structured review of the framework for assisting the revision of fisheries and aquaculture policies and laws. This assessment was guided by the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS)[1], alongside relevant regional and global best practices.

3.2.1. Policy alignment matrix

[1] AU-IBAR (2023). Consultancy to review and align national fisheries and aquaculture policies and laws with PFRS, regional instruments and global best practices for 15 AU Member States. *Final Technical Report, Consultancy for African Union-InterAfrican Bureau of Animal Resources. 84 pp.*

A key tool in this evaluation was a policy alignment matrix, covering eight critical policy areas as outlined in the PFRS. This structured approach allowed for a systematic assessment of Libya's fisheries and aquaculture policies, measuring their alignment with continental strategies for sustainable development and sectoral reform.

The assessment involved quantifying the percentage of alignment across different policy areas, identifying strengths, gaps, and priority areas for policy intervention. I the following, it provides an overview of the key policy areas examined:

Table (2) policy areas to examined with the alignments with national policies

POLICY AREA 1: CONSERVATION AND SUSTAINABLE RESOURCE USE: Policy objective: To establish national and sub-national governance and institutional arrangements that ensure that the societal contribution generated by Africa's sectors have the greatest impacts at the most appropriate level.
POLICY AREA 2: SMALL-SCALE FISHERIES DEVELOPMENT: Policy objective: To improve and strengthen the contribution of small scale fisheries to poverty alleviation, food and nutrition security and socio economic benefits of fishing communities.
POLICY AREA 3: SUSTAINABLE AQUACULTURE DEVELOPMENT: Policy objective: To jumpstart market-led sustainable aquaculture through a variety of strategies and, where appropriate, support interventionist development approaches in aquaculture by strong strategic and implementation plans.
POLICY AREA 4: RESPONSIBLE AND EQUITABLE FISH TRADE AND MARKETING Policy objective: To harness significantly the benefits of Africa's fisheries and aquaculture endowments through accelerated trade and marketing.
POLICY AREA 5: REGIONAL AND SUB-REGIONAL COOPERATION Policy objective: To strengthen South-South (bilateral and regional) cooperation, and develop coordinated mechanisms among RECs, RFBs and LME-based commissions to ensure coherence of fisheries policies and aquaculture development and their adoption and adaptation.
POLICY AREA 6: AWARENESS ENHANCING AND HUMAN-CAPACITY DEVELOPMENT Policy objective: To increase awareness of the potential and importance of the sector and enhanced capacity of people and institutions in the African fishery sector to ensure the sustainable development of capture fisheries and aquaculture based on current and emerging trends, challenges and needs.
POLICY AREA 7: HIGH SEAS FISHERIES Policy objective: To increase and consolidate the African Voice in the governance and management of high seas fisheries.

POLICY AREAS 8: CROSS-CUTTING ISSUES

This policy area has three dimensions which include resilience to climate change; gender and youth; and private sector investment.

a. Strengthening Resilience and Reducing Vulnerabilities to Climate Change in African Fisheries and Aquaculture Main objective: To address the sector's climate change and disaster risks in an integrated and holistic manner at the political level

b. Gender and Youth Main objective: To include knowledge-based gender and youth considerations in policies, laws and plans

c. Private Sector Investments & Financing Mechanisms for Fisheries and Aquaculture in Africa Main objective: To improve the financial services offered to SMEs in the fisheries and aquaculture value chains.

3.2.2. Data collection methods

A combination of qualitative and quantitative methods was used to ensure a comprehensive analysis:

a) **Literature and document review:**
- National policies, strategic plans, and legal frameworks related to fisheries and aquaculture.
- Regional and international reports, including AU-IBAR publications.
- Reports from government agencies.
- Related researches and studies.

b) **Surveys:**
- An online survey was distributed to key stakeholders to assess policy alignment with the PFRS[1].(Appendix 4)
- Responses were collected from government officials, experts, and private sector actors to identify gaps and opportunities in Libya's fishery and aquaculture.

c) **Interviews:**
- **interviews** were conducted with key informants, including policymakers. the interviews were guided by the " AU-IBAR (2023). Consultancy to review and align national fisheries and aquaculture policies and laws with PFRS, regional

[1] AU-IBAR (2023). Consultancy to review and align national fisheries and aquaculture policies and laws with PFRS, regional instruments and global best practices for 15 AU Member States. *Final Technical Report, Consultancy for African Union-InterAfrican Bureau of Animal Resources. 84 pp.*

instruments and global best practices for 15 AU Member States. Final Technical Report, Consultancy for African Union-Inter-African Bureau of Animal Resources.

d) **Validation workshop**:

- Validation of the findings in a stakeholder workshop held in Tunis, from 18-21th June 2025, where facilitated discussions were conducted to validate the findings and to give recommendations on the way forward for alignment in Libya.

3.3. Assessment of Libya's national fisheries and aquaculture instruments and their alignment with the PFRS

3.3.1. Literature and documents review:

The literature review focused on Libya's policy and strategic frameworks to assess their alignment with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) and its implementation guide. A comprehensive review of national and regional documents was conducted, including reports from (AU-IBAR), environmental and climate change policies, fisheries management tools, and national strategies related to marine wealth, aquaculture, and biodiversity conservation. These documents are including:

Table (3) List of relevant reports/documents to fishery, aquaculture, and climate change:

No	Title	
1	A Guide for the Implementation of the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa, AU-IBAR 2015.	https://www.globalseaweed.org/wp-content/uploads/2019/02/AU_IBAR_2015_policy_framework_implementation_plan.pdf
2	AU-IBAR (2023). Consultancy to review and align national fisheries and aquaculture policies and laws with PFRS, regional instruments and global best practices for 15 AU Member States. *Final Technical Report, Consultancy for African Union-Inte-rAfrican Bureau of Animal Resources. 84 pp.*	pdf
3	Comprehensive Africa Agriculture Development Programme (CAADP)-BIENNIAL REVIEW REPORT 2015 - 2018	https://au.int/sites/default/files/documents/41357-doc-CADDP_BR_2015-2018_ENGLISH.pdf
4	Africa's Blue Economy,2018	https://nairobiconvention.org/clearinghouse/sites/default/files/Africa%27s%20Blue%20Economy%20Issues_Paper_UNECA.pdf
5	Implementing the 2030 Sustainable Development Plan and African Union Plan 2063 in North African Countries	https://knowledgehub-sro-na.uneca.org/wp-content/uploads/2023/04/Implementation-of-the-2030-Agenda-and-Agenda-2063-in-North-Africa-countries-ARA.pdf
6	Regional Action Plan for Small-Scale Fisheries and Fishers in the Mediterranean and Black Sea	Pdf

7	Libya Country Brief 2021-2022 Update And Extension To December 2024	https://www.afdb.org/sites/default/files/documents/projects-and-operations/libya_-country_brief_2021-2022_update_and_extension_to_december_2024.pdf
8	National Monitoring Program for Biodiversity in Libya. 2016	https://www.rac-spa.org/sites/default/files/ecap/imap_libya/imap_libya.pdf
9	Migration, Environment & Climate Change in Libya. 2024.	https://environmentalmigration.iom.int/sites/g/files/tmzbdl1411/files/documents/2024-07/migration-environment-climate-change-in-libya.pdf
10	Women and Girls at the Forefront of Climate Action in Libya - 2022 (Summary Report)	https://arabstates.unwomen.org/sites/default/files/2022-09/Rapport-UNWOMEN-libya-Ar.pdf
11	National Report on Biodiversity in Libya	https://www.cbd.int/doc/world/ly/ly-nr-04-ar.pdf
12	Strategic Plan of the Ministry of Marine Wealth 2017-2022	pdf
13	Implementation Plan for the National Aquaculture Project in Libya 2022-2026	Pdf
14	Activity Reports of the Marine Wealth for Various Years	Pdf
15	Fishery Statistics (Arab Organization for Agricultural Development)	https://www.aoad.org/
16	Statistics of the Food and Agriculture Organization	https://www.fao.org/home/en
17	Guide to practicing aquaculture activity in Libya	pdf
18	Executive Regulations of Law No. 14 on the Exploitation and Regulation of Marine Wealth	Pdf
19	Law No. 15 on Environmental Protection	pdf
20	Libyan Maritime Law and Amendments	pdf

Specific actions were undertaken in the literature review process included:

- **Assessment of national strategies and policies alignment:**
    - Review of the Implementation Plan for the National Aquaculture Project (2022-2026) to evaluate its alignment with the PFRS objectives.
    - Analysis of Libya's commitment to the 2030 Sustainable Development Goals (SDGs) and the African Union Agenda 2063, particularly regarding fisheries and aquaculture.
    - Examination of the Strategic Plan of the Ministry of Marine Wealth (2017-2020) to identify synergies with PFRS goals on sustainable fisheries development and governance.

- **Legal and regulatory analysis:**
    - Review of national laws and regulations, including Law No. 14 on Marine Wealth and Law No. 15 on Environmental Protection, to determine their coherence with PFRS principles.
    - Identification of policy gaps in the governance of marine and fisheries resources that may hinder effective implementation of PFRS recommendations.

- **Sustainability and climate adaptation considerations:**
    - Examination of Libya's National Monitoring Program for Biodiversity (2016) and the National Report on Biodiversity to assess their integration with sustainable fisheries and marine conservation efforts.
    - Review of Women and Girls at the Forefront of Climate Action in Libya (2022) to explore gender considerations in fisheries and aquaculture sectors.

This literature review provides a foundation for understanding Libya's policy landscape concerning fisheries and aquaculture, identifying key gaps and opportunities for alignment with PFRS objectives. The findings will inform recommendations for enhancing national strategies to support sustainable development in Libya's blue economy sector.

3.3.2. Stakeholder engagement and data collection:

A multi-stakeholder approach was adopted to gather diverse perspectives on Libya's fisheries and aquaculture sector. Engagements were conducted with government institutions, private sector actors, academia, research institutions, and national organizations. These engagements aimed to assess the current policy landscape, regulatory environment, and alignment with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS).

A purposive sampling technique was employed to ensure that the survey targeted individuals with relevant expertise in fisheries, aquaculture, and blue economy policy development. The selection process focused on respondents who are directly involved in decision-making, regulation, research, or industry operations.

- Consultations with the Ministry Marine Resources, Ministry of Environment National Project of Aquaculture, and Marine Biology Research Centre.

- Distribution of the survey[1] by email, to Monitor the Alignment of National and Regional Fisheries and Aquaculture Policies with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa to key stakeholders before the validation workshop to gather preliminary insights.

3.4. Framework for assisting the revision of fisheries and aquaculture strategies, policies and laws.

[1] AU-IBAR (2023). Consultancy to review and align national fisheries and aquaculture policies and laws with PFRS, regional instruments and global best practices for 15 AU Member States. *Final Technical Report, Consultancy for African Union-InterAfrican Bureau of Animal Resources*

3.4.1. Overview of the national legislation, laws and regulatory frameworks

The marine, coastal, and aquatic environments in Libya, much like in other coastal nations, are generally regarded as public or shared resources. Unlike land, which often falls under defined ownership structures, these environments remain accessible to various users unless regulated by clear legal frameworks. In the absence of robust governance mechanisms, these ecosystems are susceptible to overexploitation, resource depletion, and environmental degradation. The role of the state, therefore, becomes crucial in establishing legal instruments that regulate human activities, ensuring sustainability while maximizing economic and social benefits for local communities.

Libya's legal framework governing fisheries and aquaculture has evolved in response to the increasing importance of these sectors in national food security and economic diversification. Since the country's independence in 1952, legislative efforts have sought to regulate marine-based industries such as fishing, aquaculture, coastal tourism, and maritime transportation. However, gaps in enforcement, institutional coordination, and sector-specific legal instruments have often hindered the effective management of marine resources. In this context, aquaculture, an emerging sector in Libya, has required specialized regulatory frameworks to ensure its sustainable development.

A significant step toward formalizing the aquaculture sector in Libya was the publication of the Guide to Practicing Aquaculture Activity in Libya by the National Project of Aquaculture[1]. This handbook provides a structured approach to regulating aquaculture activities, addressing issues related to licensing, environmental sustainability, and sectoral governance. The guide outlines the procedures for obtaining permits, establishing fish farming projects, and adhering to responsible aquaculture practices. It defines the technical and administrative processes required for different forms of aquaculture, including offshore cage farming, coastal aquaculture, and inland fish farming. Furthermore, it sets forth procedural and environmental controls designed to mitigate risks associated with aquaculture expansion, ensuring that farming practices do not compromise marine biodiversity or ecosystem health.

By institutionalizing a clear regulatory framework through this guide, Libya aims to strengthen the legal foundation for its aquaculture industry. The structured guidelines not only facilitate the formalization of the sector but also contribute to attracting investment, encouraging responsible private-sector participation, and fostering a more organized approach to aquaculture

[1] It is an institution created on 2021 under the Ministry of Marine resources, to manage Aquaculture sector in Libya. https://www.npaqua.ly/home-ar/

development. Moreover, the handbook establishes standardized permit forms and licensing requirements, which help create a transparent system for managing and monitoring aquaculture activities.

Table (4): Key Laws and Regulations of Marine Activities and Sea-Based Industries in Libya

Law	Current Status	Date of Issuing
Libyan Maritime Law 1953.	Original - Modified	November 28, 1953
Law No. 12 of 1959 on Sponge Fishing.	Original - Valid	January 15, 1959
Law No. 8 of 1962 Regulating Fishing.	Canceled	April 26, 1962
Law No. 2 of 1968 Amending Some Provisions of Law No. 8 of 1962 Regulating Fishing.	Rate - Canceled	March 3, 1968
Law No. 53 of 1970 Regulating Port Fees.	Original - Modified	April 21, 1970
Law No. 81 of 1970 Regulating Ports.	Original - Modified	April 21, 1970
Law No. 82 of 1970 Establishment of the Libyan General Corporation for Ports and Lighthouses	Original - Valid	April 25, 1970
Law No. 26 of 1975 Establishing the Food and Marine Resources Affairs Council.	Original - Valid	April 15, 1975
Law No. 35 of 1976 Amending Some Provisions of Law No. 53 of 1970 Regulating Port Fees	Rate - Valid	May 4, 1976
Law No. 62 of 1976 Amending Some Provisions of the Libyan Maritime Law 1953.	Rate - Valid	July 14, 1976
Law No. 67 of 1976 Marine Fishing Cooperatives	Canceled	July 14, 1976
Law No. 20 of 1977 Establishing the Libyan-Greek Marine Fishing Company	Original - Valid	September 24, 1977
Law No. 14 of 1989 Regulation and Exploitation of Marine Resources	Original - Valid	June 3, 1989
Law No. 14 of 1991 Amending and Adding Some Provisions to Law No. 81 of 1970 Regulating Ports.	Rate - Valid	March 22, 1991
Law No. 23 of 1991 Marine Fishing cooperatives.	Original - Valid	April 4, 1991

The laws listed in the table above are among the most significant Libyan laws, were Law No. 14 of 1989[1] is most important, which governs marine fishing and aquatic life activities, either directly or indirectly. In this context, it is essential to review these laws (whether still in force, amended, or repealed) as part of the broader assessment of Law No. 14. Additionally, it is important to highlight that reviewing Law No. 14 must also involve evaluating the regulations issued under its authority, specifically: 1) General People's Committee for Marine Resources Decision No. 71 of 1990, which issued the executive regulations for Law No. 14 of 1989 concerning the exploitation

[1] Enacted in 1989, this law governs the exploration, utilization, conservation, and management of marine organisms within Libya's territorial waters and exclusive economic zones. Key Provisions: 1) Licensing and Access Control, 2) Conservation Measures, 3) Vessel and Equipment Regulations, 4) Enforcement and Penalties. While Law No. 14 of 1989 provides a comprehensive framework for marine fisheries, it does not explicitly address aquaculture activities. Subsequent interpretations, such as the Technical Interpretation of Law 14 (SMW1991), offer minimal guidance on aquaculture, highlighting the need for updated legislation to support the sector's development. more information available: https://faolex.fao.org/docs/pdf/lib11252.pdf

of marine resources. 2) General People's Committee for Marine Resources Decision No. 80 of 1991, which provided the technical regulations for Law No. 14 of 1989 regarding the exploitation of marine resources.

The broader legal and regulatory landscape for fisheries and aquaculture in Libya remains a work in progress. While Law No. 14, and the Guide to Practicing Aquaculture Activity in Libya provides a specialized framework for aquaculture operations, an overarching legislative approach is still needed to integrate the various aspects of fisheries governance, resource conservation, and economic development. Ensuring alignment between national legislation and regional and international best practices will be critical in enhancing the sector's sustainability. In this regard, regulatory frameworks must not only focus on access and operational guidelines but also address emerging challenges such as climate change resilience, private-sector investment, and equitable resource distribution.

Strengthening Libya's fisheries and aquaculture governance requires continuous legal refinement and improved enforcement mechanisms. The enforcement tools for managing and protecting fishery resources and marine habitats in Libya are still very limited, both in terms of legal instruments and operational capacity. Existing tools are often reactive, poorly funded, and lack coordination among responsible institutions. Below is a breakdown of what enforcement tools do exist, what's missing, and areas for development:

Table (5) state of implementation

Enforcement Component	Status in Libya	Notes
Updated Fisheries Law	Absent	Existing laws no 14 1989 outdated, not comprehensive.
Trained Fisheries Inspectors	Very limited	Few officers with specific training.
Vessel Monitoring Systems (VMS)	Not implemented at scale	Small-scale fishers not monitored.
Patrol Boats for Fisheries	Available but not dedicated	Coast Guard and the Navy do general maritime patrols.
Port Inspection Mechanisms	Nonexistent	No systematic checks at landing sites or ports.
IUU Fishing Deterrents	Weak penalties and application	Minimal prosecutions or deterrence.
Observer Programs	Not implemented	No coverage of industrial or artisanal vessels.

A well-regulated sector can contribute significantly to food security, employment generation, and economic diversification. As the legal framework evolves, it will be essential to ensure that policies remain adaptable to changing environmental and economic conditions, supporting a resilient and sustainable blue economy for Libya.

3.4.2. Institutional framework and governmental bodies involved:

Since the establishment of the Libyan state in 1950, the institutional frameworks responsible for managing the fisheries and aquaculture sector have undergone multiple changes. These changes reflect the evolving priorities and policies of the government and its efforts to develop marine sector. This report outlines the key developments in the sector's governance, tracing the historical transformation from decentralized regional offices to the current national framework.

Early developments (1950-1962): In the early years following the establishment of the Libyan state in 1952, fisheries management was largely decentralized, with fishing offices operating in the states. Libya, at the time, followed a federal system, and these offices were supervised by the Minister of Transportation in each province. The sector, however, was indirectly managed by the Minister of National Economy, reflecting the limited institutional structure focused specifically on marine resources. In 1962, the Libyan government took a significant step toward formalizing the sector by issuing a fishing regulation law No 8. This law defined the institutional framework and centralized responsibility under the Fisheries Affairs Authority, which was placed under the supervision of the Ministry of Industry. This marked the first effort to develop a cohesive national policy for managing marine resources.

Centralization of fisheries management (1970-1984) In 1970, the institutional framework for fisheries underwent a reorganization, with fishing offices being moved under the jurisdiction of the General Administration of Water Resources, still part of the Ministry of Industry. This integration with water resources reflected a broader approach to managing natural resources under a single administrative structure. By 1975, the government recognized the need for a specialized council to oversee food security and marine resources, leading to the creation of the Food and Marine Resources Affairs Council. The Council absorbed the responsibilities of the Ministry of Industry regarding marine resources management, signaling a shift towards more specialized governance. The 1980s saw the expansion of research and development activities within Libya's fisheries sector. In 1984, the Marine Biology Research Centre was established, marking the first dedicated research institution focused on marine ecosystems and fisheries. The centre's mandate included studying marine biodiversity, fish stock assessments, and providing scientific data to support sustainable management policies

Establishment of independent marine resources entities (1988-2000): A pivotal moment came in 1988 with the creation of the General Secretariat of Marine Resources, marking the first time the fisheries and aquaculture sector operated as an independent legal entity. The sector now

had its own ministry, tasked with all aspects of management, planning, research, and development. The Marine Biology Research Center and the General Authority for the Development of Aquaculture were transferred to this new body, consolidating the sector's institutional framework. In 1995, the government further bolstered the sector's infrastructure by establishing the Authority for the Establishment and Maintenance of Marine Fishing Ports and Harbors, which operated an independent entity. This governmental body was tasked with developing and maintaining the necessary infrastructure for the fishing industry, essential for supporting both artisanal and commercial operations.

Reorganization and consolidation (2000-2007): In 2000, the Libyan government introduced the General Authority for Agriculture, Animal, and Marine Resources, which consolidated all the entities and organizations responsible for marine fishing and aquaculture activities. This step aimed to unify agricultural and marine resource management under a single authority, enhancing coordination and efficiency. However, by 2002, a more specialized focus on marine resources led to the establishment of the General Authority for Marine Resources and Aquaculture, which fell under the General People's Committee for Agriculture, Animal, and Marine Resources. In 2005, the Permanent Committee for Marine Fishing in Libyan Waters was formed to provide further oversight and ensure sustainable fishing practices within Libyan territorial waters. In 2007, the General Authority for Marine Resources was officially established, overseeing the following key entities: **1)** Ports and Harbors Establishment and Maintenance Entities**, 2)** Marine Biology Research Center**, 3)** Public companies operating in the marine resources sector**, 4)** The Permanent Committee for Marine Fishing in Libyan Waters

Post-2011 changes; transitional governance and sectoral realignment (2011-2024): Following the political changes in 2011 and the adoption of a transitional government, Libya's institutional structure underwent significant changes. The General People's Committee was renamed the Council of Ministers, and the people's committees transitioned into formal ministries. The General Authority for Marine Resources was then integrated into the Ministry of Agriculture, Animal, and Marine Resources. Despite this integration, the General Authority retained financial independence, allowing it to continue its work in regulating and developing the fisheries and aquaculture sector.

In 2021, the Libyan government established the Ministry of Marine Resources, granting it full independence from the Ministry of Agriculture and Animal Resources. This newly formed ministry marked a significant milestone in the development of the sector by placing all marine-related activities under one unified authority. A number of key institutions were transferred to the Ministry

of Marine Resources, including: **1**) Fishing Ports Establishment and Maintenance Agency**, 2)** Marine Biology Research Center**, 3)** General Authority for Marine Fishing**, 4)** National Project of Aquaculture.

3.4.3. Benchmarking Libya's policies and best practices from other African nations.

Through the analysis, several African countries have emerged as key players in fisheries and aquaculture, both in terms of production volume and successful national policies that have driven their growth. These countries, based on their recent production data, not only contribute significantly to regional fish supply but also play a crucial role in food security, job creation, and economic development within the fisheries sector.

- **Egypt**: Over 1.5 million metric tons annually, with aquaculture leading at over 1 million metric tons.
- **Morocco**: Around 1.4 million metric tons annually, with wild capture dominating.
- **Nigeria**: About 1.1 million metric tons, with a growing aquaculture sector focusing on tilapia and catfish.
- **Mauritania**: Roughly 700,000 metric tons annually, with a significant focus on marine capture fisheries.
- **South Africa**: Approximately 500,000 metric tons, with increasing aquaculture activity.
- **Ghana**: Roughly 350,000 metric tons, with tilapia farming leading the aquaculture sector.

3.4.3.1. Egypt: Strong government support and investment in fisheries

Lesson learned:

Libya can indeed draw several valuable lessons from Egypt's aquaculture development policies, given Egypt's leading position in Africa's aquaculture production. Egypt has demonstrated how strong government involvement can accelerate the development of the fisheries sector. Key actions taken by the Egyptian government include:

- **Policy frameworks:** The government has implemented national strategies such as Egypt's Sustainable Agricultural Development Strategy 2030, which includes fisheries as a key sector.
- **Infrastructure development:** Large-scale investments in hatcheries, feed mills, and processing facilities have helped expand production.
- **Capacity building and training programs:** strong capacity-building initiatives and programs have been adopted for fish farmers in a collaboration with national and international

organizations, including training on best practices in fish farming, disease management, and sustainable practices.

- **Financial support:** The government has provided incentives, including low-interest loans for fish farmers, subsidies for fish feed, and tax exemptions on equipment.
- **Public-private partnerships:** Private investors have been encouraged to participate in fisheries projects through streamlined regulatory procedures.

Application for Libya:

- Libya can establish a national strategy for fisheries development, clearly defining roles for government, private sector, and communities.
- Investment in infrastructure such as hatcheries, landing sites, and cold storage will improve fish supply chains.
- Libya could establish similar training programs to upskill Libyan technicians, local fish farmers and fisheries managers, covering sustainable practices and efficient aquaculture management techniques.
- Financial incentives (loans, subsidies, or tax relief) can encourage private sector involvement and improve productivity.

3.4.3.1. Morocco: Integrated and sustainable fisheries management

Lesson learned:

Libya can indeed draw several valuable lessons from Morocco's sustainable development policies, where Morocco's Halieutis Strategy focuses on three main pillars:

1. **Sustainability:** Establishing protected fishing zones and implementing quotas to prevent overfishing.
2. **Value chain development:** Encouraging processing and export of fishery products to improve economic returns.
3. **Global market access:** Aligning with international sustainability standards to enhance exports.

Application for Libya:

- Libya can develop a fisheries master plan that integrates sustainability, economic growth, and research-driven management.
- Marine protected areas and quotas can be introduced to safeguard fish stocks.
- Developing fish processing industries will enhance value addition and exports.
- Adopting international standards (such as EU sanitary regulations) can improve Libya's access to international markets.

3.4.3.3. Nigeria: policy reforms to boost private sector participation

Lesson learned:

Nigeria has focused on creating an enabling business environment for fisheries growth, with key initiatives such as:

- **Deregulation and incentives:** The government moved from direct sector involvement to enabling private-sector-driven growth.
- **Tax breaks and investment incentives:** Exemptions on equipment imports and tax relief for fish farmers.
- **Public-private partnerships (PPPs):** Encouraging private companies to establish fish farms and hatcheries.

Application for Libya:

- Deregulating the fisheries sector and allowing private investment to lead industry growth.
- Developing a one-stop-shop for business registration to facilitate fisheries-related investments.
- Providing tax exemptions on imports of fishing gear and aquaculture equipment to encourage industry growth.
- Encouraging local banks to provide fisheries loans with lower interest rates.

3.4.3.4. Mauritania: effective fisheries governance and foreign investment

Lesson learned:

Mauritania has managed to attract foreign investment while **ensuring national benefits** through:

- **Licensing foreign vessels:** Allowing foreign fleets to fish in Mauritanian waters under strict regulations.
- **Revenue reinvestment:** Channeling fees from foreign fisheries into local infrastructure projects.
- **Local content policies:** Requiring foreign investors to hire local workers and invest in fish processing in Mauritania.

Application for Libya:

- Libya can develop clear policies for foreign fisheries agreements, ensuring that benefits are shared fairly with local stakeholders.

- Revenue generated from foreign licenses can be reinvested in developing landing sites, storage, and fisheries monitoring systems.
- Introducing local employment quotas for foreign vessels can boost job creation in Libya's coastal communities.

3.4.3.5. South Africa: strong enforcement of fisheries regulations and comprehensive resource management:

Lesson learned:

South Africa has implemented integrated marine spatial planning, a strategy that balances environmental protection with resource use. The country has robust frameworks for ecosystem-based management (EBM), which ensures sustainable exploitation while preserving biodiversity. South Africa has demonstrated that strong enforcement mechanisms lead to sustainable fisheries by:

- **Implementing quota systems** to prevent overfishing.
- **Strengthening Monitoring, Control, and Surveillance (MCS) programs** to combat illegal fishing.
- **Using technology (Vessel Monitoring Systems - VMS)** to track fishing vessels.

Application for Libya:

- Libya can establish a Fisheries Monitoring Agency to track and regulate fishing activities.
- Introduce a licensing quota system to ensure sustainability of fish stocks.
- Invest in VMS technology to track illegal fishing activities in Libyan waters.
- Marine spatial planning, as seen in South Africa, could support strategic resource allocation and ecosystem health.

3.4.3.6. Ghana: Co-management and community participation

Lesson Learned:

Ghana's Community-Based Fisheries Management Committees (CBFMCs) enable local communities to participate in fisheries governance, fostering resource stewardship and compliance. This model has reduced illegal fishing and promoted sustainable practices within communities. Ghana has successfully involved **local fishing communities** in fisheries management through:

- **Co-management policies**, allowing fishers to help enforce regulations.
- **Closed seasons**, where fishing is banned temporarily to allow fish stocks to recover.

- **Local fisheries committees**, giving communities a voice in decision-making.

Application for Libya:

- Libya can introduce community-based fisheries management, empowering local fishers to regulate their resources.
- Implement seasonal fishing bans to prevent overfishing.
- Encourage the formation of local fishery committees to involve fishers in policy discussions.

3.4.3.7. Seychelles: Strengthened monitoring and surveillance:

Seychelles has developed advanced Monitoring, Control, and Surveillance (MCS) systems to combat illegal, unreported, and unregulated (IUU) fishing. Seychelles' MCS systems have been recognized as one of the most effective tools for combating IUU fishing[1], and their integration of satellite tracking and electronic reporting has led to a significant reduction in illegal fishing:

- **Satellite tracking system** helps monitor vessels in real time, detecting illegal activities and ensuring vessels are adhering to fishing quotas and regulations.
- **Electronic reporting systems** allow for more efficient data collection and processing, enabling the authorities to identify discrepancies or illegal activities promptly.

Application for Libya:

- Libya could implement satellite-based tracking systems for all commercial fishing vessels operating within its waters.
- Libya can introduce electronic reporting of catch data and vessel locations. This would enable authorities to monitor fishing activities and ensure compliance with national and international fishing regulations, making the data more accessible and reducing the risk of fraudulent reporting.
- Strengthening port inspections is essential to prevent illegal fish imports and to verify the legality of landed catches.

3.4.4. Libya's fisheries and aquaculture and key policy intervention entry points:

[1] Europêche Report on MCS Systems in Seychelles, 2021

To enhance alignment with the PFRS and improve fisheries and aquaculture management learning lessons from key African countries that have been mentioned above, Libya may consider the following intervention entry points:

a. **Institutional reforms and dedicated agencies**

- **Strengthen regulatory bodies**: By enhancing the capacity of institutions such as the General Authority for Marine Wealth, Libya could ensure that fisheries regulations are consistently enforced.

b. **Enhancing community-based management**

- **Establish community-based fisheries management committees**: Following Ghana's example, Libya could engage local communities in governance, fostering compliance and conservation at a grassroots level.
- **Support local cooperatives**: Encouraging the formation of fishing cooperatives would empower communities to self-regulate, develop local economies, and reinforce sustainable fishing practices.

c. **Investment in monitoring, control, and surveillance (MCS) technologies**

- **Implement satellite tracking and electronic reporting systems**: Drawing from Seychelles, Libya could invest in MCS technologies to monitor fishing activities, control illegal practices, and enhance transparency.
- **Develop port inspection programs**: Comprehensive inspection of fishing vessels at ports could help Libya verify legal compliance, contributing to sustainable resource management.

d. **Strategic aquaculture development and public-private partnerships (PPP)**

- **Encourage PPPs for aquaculture growth**: Following Morocco's approach, Libya could incentivize private investments in aquaculture, providing infrastructure and regulatory support for sustainable growth.
- **Develop inland aquaculture**: Developing inland aquaculture projects, as seen in other North African countries, could boost Libya's food security and economic diversification.

e. **Building capacity for data collection and research**

- **Partner with academic and research institutions**: Libya could adopt Kenya's model of research collaboration to ensure data-driven policy. This would facilitate resource assessments, environmental monitoring, and stock assessments.

- **Regular stock and environmental assessments**: Routine data collection and reporting would provide a basis for sustainable management, allowing Libya to respond to ecosystem changes and align with PFRS goals.

3.5. The criteria and indicators for alignment and implementation of the PFRS:

From the various documents, discussions, surveys and interviews, Libya's fisheries and aquaculture frameworks show partial alignment with the African Union's Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS), Agenda 2063, Kampala declaration, and trade protocols like SACU, SADC, and AFCFTA. However, significant gaps remain in institutional capacity, policy implementation, and regulatory enforcement. Below is an assessment of how Libya aligns with these frameworks and where improvements are needed.

3.7.1. POLICY AREA 1: Conservation and Sustainable Resource Use

Policy Objective: To establish national and sub-national governance and institutional arrangements that ensure that the societal contributions generated by Africa's sectors have the greatest impacts at the most appropriate level.

POLICY AREA 1/ OUTCOME 1: Policies, frameworks and tools in place to sustainably increase national benefits from fisheries and aquaculture

Libya has some legal and strategic foundations supporting fisheries and aquaculture, including Law No. 14 of 1989 and the revival of the General Fisheries Strategy under the Ministry of Marine Wealth. The 2021 establishment of the National Project for Aquaculture (NPA) represents a structural move toward coordinated aquaculture development. However, there is no comprehensive, integrated national fisheries or aquaculture policy. While fisheries are referenced in national planning, budget allocations remain low, only 0.44% of the development budget (1970–2010) was directed to the sector. Institutional capacity is limited in both the public and private sectors, and strategic planning and execution are weak. Pilot aquaculture activities exist in high-potential coastal zones, yet infrastructure and investment remain insufficient. Libya engages in several regional and international programs (e.g., GFCM, UNCLOS, WestMED), but does not yet harmonize aquaculture laws and standards with these frameworks.

Table (6) Alignment Assessment – Policy area 1Outcome 1

Criteria	Libya's Current Status	Gaps Identified	Level of Alignment	Recommendations

(1) Fisheries and aquaculture mainstreamed into national development plans				
a. Member States should increase allocation of national budgets to fisheries and aquaculture	Not fully mainstreamed with strong financing.% from total budget (2010-2023) about 0.26 %	Insufficient and inconsistent funding	not Aligned	Increase national funding allocation for fisheries and aquaculture in both operations and development.
b. The aquaculture development programme focus on areas where market-led aquaculture investments and developments are underway and accelerated rates of aquaculture production are being achieved, or great potentials exist	Zones identified, but market-led initiatives are limited	Weak investment and infrastructure support in aquaculture. The private sector is very small and it contribution to fish market is not recognized.	Weak Aligned	Promote PPPs and targeted investments in high-potential areas
c. The state focus on strengthening the private and public sectors' capacity to develop comprehensive and realistic strategic plans and their implementation in the short to medium term	Plans exist but poorly implemented.	Lack of technical and financial implementation capacity.	Weak Aligned	Establish inter-ministerial task forces; and PPP promotion and improve implementation tools
d. The State encourage the development, expansion or introduction of new and proven production techniques	FAO-supported programs exist (e.g. EASTMED, MEDSUDMED); tech adoption slow	No national R&D or tech transfer strategy.	Weakly Aligned	Support modern technologies via pilot farms and regional collaboration.
Regional/International Expectations				
a. Harmonization of regional transboundary aquaculture frameworks	Member of GFCM, WestMED, ICCAT, Barcelona Convention, UNCLOS	Weak bilateral regulatory systems	Aligned	Develop joint regulatory frameworks (e.g., with Tunisia, Algeria) and strength the related local regulations.
b. Endorse and apply standards and norms on aquatic animal health: fish disease, safety, quality and traceability	Veterinary and Marine Biology Centers exist, but coordination is limited.	No integrated aquatic animal health or biosafety strategy	Weak aligned	Strengthen national biosecurity and aquatic animal health system; implement GMO/quarantine protocols

c. *Implement quarantine measures for the introduction of exotic and genetically modified genomes*	There is a formal quarantine mechanism in place. Imports are controlled by (NCAH)	There is no dedicated national quarantine system for aquatic animals nor a formal legal framework that regulates the introduction of exotic or genetically modified aquatic species.	weak aligned	Enact clear national protocols for biosecurity and import of aquatic organisms. Develop and enforce biosafety and quarantine mechanism for aquaculture imports
d. *Elaborate mechanisms to support and harmonize the activities of regional aquaculture and capture fisheries bodies*	Libya participates in GFCM (Rome), MedSudMed, CopeMed, MEDRAP, ICCAT. AOAD and WestMED but lacks institutional frameworks for long-term regional support	Weak follow-up and translation of recommendations into policy	Weak aligned	Enhance national engagement and ensure outputs of regional projects feed into Libya's national policy development.
(2) Globally accepted best practices integrated into national policy frameworks and tools				
a. *Policy promotes globally accepted best practices and pursuing excellence in fisheries science and integrated evaluations*	Libya acknowledges UNCLOS and is a member of the GFCM and FAO but has not yet ratified key instruments such as the FAO Port State Measures Agreement (PSMA) and the UN Fish Stocks Agreement (UNFSA). The existing Law No. 14 (1989) on fisheries is outdated and lacks clear references to	Lack of reference to global frameworks (e.g., FAO Code of Conduct for Responsible Fisheries, EAF) in national laws or strategies. Weak science–policy interface and no integrated evaluation systems	Weak aligned	• Ratify and domesticate key instruments (PSMA, UNFSA). • Update fisheries legislation to include best practice principles (EAF, precautionary, CCRF). • Create a national platform linking researchers and policymakers.

	ecosystem-based approaches (EAF), the precautionary principle, or co-management. Scientific capacity exists within institutions like the Marine Biology Research Centre (MBRC), but coordination with policy is weak, and integrated evaluations (e.g., socio-economic, ecological) are not systematically carried out.			
b. Promotion of effective management, improved product processing, utilization, and technology transfer	The National Project for Aquaculture has introduced some technical guidance and regulatory templates to promote responsible aquaculture. However, the fisheries sector lacks clear strategic plans for improving fish processing, handling, or marketing. Most fish are sold "fresh" with minimal value addition. There are no national programs for technology transfer or mechanisms for sharing innovations with	No national strategy or infrastructure for fish handling and processing. • No innovation extension or support services. • No dedicated fish product R&D or technology incubation programs. Very small size private sector for fish manufacturing and processing.	Not Aligned	• Establish a fishery post-harvest improvement strategy. • Set up public-private partnerships for fish processing, canning and cold chain development. • Develop and institutionalize technology transfer centers or innovation hubs for fisheries and aquaculture.

	fishers or processors. Libya does not have a functioning fish quality certification scheme or modern fish landing facilities at scale. Technology transfer is limited to donor-supported pilot projects.			
(3) *Policy and management decisions are made based on the existence of reliable data and information management systems.*	Libya's fisheries data is incomplete and outdated. The Marine Biology Research Center (MBRC) conducts some monitoring and doing field researches but there is no centralized or modern stock assessment system or socio-economic fisheries database up-to-date.	Lack of reliable data systems and evidence-based policy support. and weak financial support for building reliable data base.	Weak alignment	Establish national stock assessment programs, integrate socio-economic monitoring, and adopt digital reporting tools across coastal landing sites.
(4) *Adoption of participatory fisheries management mechanisms/approaches*	There are limited formal co-management structures or participatory governance mechanisms involving fisher communities or NGOs.	Absence of institutionalized participatory management models (e.g., co-management, TURFs).	Weak alignment	Institutionalize stakeholder platforms (e.g. local fishery councils), involve NGOs and community representatives in policy formulation and monitoring.

POLICY AREA 1/ OUTCOME 2: Effective and sustainable national and regional Monitoring, Control and Surveillance (MCS) systems in place to ensure that sustainable benefits are realized

Libya's current MCS framework is outdated and under-resourced. Law No. 14 (1989) offers a limited legal base, with no modern surveillance systems (e.g., VMS, electronic logbooks, or observer programs). MCS coordination among the Coast Guard, Navy, and fisheries institutions is fragmented and reactive. Regional engagement in surveillance cooperation through GFCM and WestMED is passive. There are no operational protocols for joint patrols, shared stock assessments, or real-time data exchange with neighboring states.

Table (7) Alignment Assessment – Policy area 1-Outcome 2

Criteria	Libya's Current Status	Gaps Identified	Level of Alignment	Recommendations
1- *National MCS frameworks*	Old law with no VMS, observers, or e-logbooks	Lack of strategic MCS plan and modern infrastructure	Weak alignment	Draft modern MCS legislation; implement digital surveillance and enforcement tools
2- *Regional MCS cooperation*	Passive participation in GFCM, WestMED	No shared patrol protocols or real-time data exchange between Libya and neighboring countries. Limited Libyan capacity to participate in joint missions or inspections. Legal and institutional fragmentation within Libya hinders regional coordination. funding, and infrastructure barriers slow integration.	Weak alignment	Strengthen its role in GFCM-led MCS programs, including observer training and VMS use. Sign bilateral cooperation agreements (e.g., with Tunisia or Malta) for MCS coordination. Develop a national MCS strategy that aligns with the RPOA-IUU. Integrate fisheries MCS into broader maritime security frameworks through inter-agency protocols.

POLICY AREA 1/ OUTCOME 3: Healthy ecosystems to support sustainable fisheries and aquaculture

Libya has made strides in marine conservation through MPAs, wetland designations under RAMSAR, and cooperation with organizations like WWF and SPA/RAC. MPAs like Farwa, Ain Al-Ghazala, and El Kouf are under development. However, integration between environmental and fisheries policies is lacking. Research exists at MBRC and national universities but is fragmented and poorly linked to policy. There is no aquatic animal health strategy or biosecurity plan, posing risks if aquaculture expansion.

Table (8) Alignment Assessment – Policy 1- Outcome 3

Criteria	Libya's Current Status	Gaps Identified	Level of Alignme	Recommendations

(1) *Scientific research (natural, social, economic and technological) support fisheries management and aquaculture development in place*	MBRC active; links to planning weak.	Weak support to marine research centers, especially financial support for integrating science into decisions.	Aligned	Establish a science-policy interface platform
(1) *a. there are tools and programs in place to protect fishery resources and their habitats*	Despite some acts and resolutions e.g. 272/273 established MPAs; efforts with IUCN/WWF. Libya has limited but emerging tools and programs to protect fishery resources and their habitats. Most efforts remain fragmented, under-resourced, and project-driven, rather than being part of a comprehensive national ecosystem-based fisheries management strategy.	Marine Protected Areas (MPAs) – Still Underdeveloped. There are legal restrictions Fishery Closure Zones, use of explosives and poisons ..etc though enforcement is weak. Fishery Closure Zones	Aligned	Establish a national fisheries inspection unit under GAMW or a new autonomous fisheries authority. Implement VMS/AIS requirements for vessels over a certain size. Train and equip local inspectors, including in port and at sea. Develop an IUU fishing reporting system, accessible to authorities and communities. Create inter-agency enforcement protocols, linking Coast Guard, Navy, and fisheries authorities.
(2) *measures to adhere to national, regional and international pollution instruments, standards and practices, especially regarding chemical products and plastics*	Libya has limited but evolving measures to adhere to national, regional, and international pollution instruments, especially regarding chemical products, plastics, and marine pollution	National environmental laws are poorly enforced, especially for pollution offenses. No national ban or extended producer responsibility for plastics. Overlaps between EGA, municipalities, and ministries; no unified marine pollution task force. Inconsistent reporting to international conventions.	Aligned	Establish a national plastic pollution reduction roadmap, with targets and stakeholder engagement. Launch public awareness campaigns in partnership with schools, NGOs, and municipalities. Engage in cross-border cooperation through UNEP/MAP and the GFCM's environmental mandates.

3.7.2. POLICY AREA 2: Small-scale fisheries development

Policy Objective: To improve and strengthen the contribution of small-scale fisheries (SSF) to poverty alleviation, food and nutrition security, and socio-economic development of fishing communities.

POLICY AREA 2/ OUTCOME 1: Role and importance (contribution) of fisheries for improved livelihoods, food and income of small scale fishing communities and related operators are evident, recognized and secured in Member States.

Small-scale fisheries account for over 85% of Libya's domestic fish production and directly support the livelihoods of thousands of coastal households. However, despite their importance, SSFs remain underrepresented in national policy and strategic documents. Socio-economic data on the contribution of SSF to employment, income, and nutrition are scarce or outdated, and policy frameworks largely focus on commercial and offshore fisheries. There is no dedicated SSF development strategy, and institutional support remains fragmented. This lack of formal recognition limits investment and hampers sustainable development of the sub-sector.

Table (9) Alignment Assessment – Policy area 2- Outcome 1

Criteria	Current Status in Libya	Identified Gap	Level of Alignment	Recommendations
1. Mechanisms and strategies that highlight the economic and social importance of small-scale fisheries development	Not explicitly mentioned in national fisheries legislation or strategy. But most of the fishery sector in Libya are small scale.	Absence of socio-economic data and dedicated SSF strategy	Not Aligned	Develop a national SSF strategy, aligned with the FAO Voluntary Guidelines and GFCM RPOA-SSF. Integrate SSF into coastal development plans, food security policies, and blue economy frameworks. Support fisher cooperatives with legal status, training, and funding to enhance collective action.
2. *Mechanisms and strategies to unlock and unleash potentials of the subsector to generate socio-economic benefits*	Infrastructure exists in major cities, but rural SSF lacks support	No SSF-specific investment plans, training, or credit schemes	Weak Alignment	Develop SSF value chain programs and access to microfinance

3. *There is a system to facilitate organized value chain development in order to effectively derive the benefits from small-scale fisheries*	Weak value adding mechanisms; most of production are sold freshly weak cold chain; weak cooperatives	Fragmented value chains, lack of post-harvest facilities	Not Aligned	Support formation of SSF cooperatives, provide infrastructure for cold storage and processing
4. *small scale fisheries are prioritized in National Agricultural Investment Plans (NAIP), Poverty alleviation documents and National strategy documents, etc.*	NAIP and national development plans focus on crops and livestock	SSF not mentioned in major planning documents	Not Aligned	Revise NAIP and other plans to integrate SSF goals

POLICY AREA 2/ OUTCOME 2: Bilateral and regional cooperation for effective management of shared fishery resources and ecosystems is strengthened

Libya shares migratory and transboundary stocks in the Mediterranean Sea with neighboring countries (e.g., Tunisia, Egypt). Despite its membership in GFCM and participation in regional dialogues (e.g., WestMED), Libya lacks bilateral or multilateral agreements specifically targeting SSF. There is no implementation of regional minimum terms and conditions (MT&Cs) for access to shared fishery resources, nor any joint monitoring or stock assessment initiatives at the SSF level.

Table (10) Alignment Assessment – Policy area 2- Outcome 2

Criteria	Current Status in Libya	Identified Gap	Level of Alignment	Recommendations
1. *Adoption and implementation of regional MT&Cs for fisheries access*	Not implemented	No bilateral or multilateral agreements for SSF	Not Aligned	Align its licensing conditions with regional or sub-regional agreements (e.g., via the GFCM, AU-IBAR, or COMESA). Develop formal mechanisms to adopt regional minimum terms and conditions for foreign fishing access. Incorporate data exchange, observer requirements, catch documentation, and compliance protocols into its legislation.

2. Regional cooperation on MCS and shared stocks	Libya currently lacks strong formal mechanisms for efficient and effective regional cooperation in fisheries management, despite Libya is part of many active regional fisheries management organizations such as GFCM, ICCAT and WestMED initiative	No joint surveillance, stock monitoring or SSF project cooperation.	Weak Alignment	Strengthen technical cooperation under GFCM's SSF regional plans. Negotiate bilateral or sub regional MCS agreements with neighboring states (e.g. Tunisia, Egypt).

POLICY AREA 2/ OUTCOME 3: Fishers are organized to foster good fisheries governance, sustainable development and responsible use of natural resources

Fishers in Libya are rarely organized into functional cooperatives or associations. Although some cooperatives exist in key coastal cities like, they lack legal status, financial capacity, and integration into governance processes. Moreover, Libya has not localized the FAO Voluntary Guidelines for Securing Sustainable SSF (2015), and participatory governance mechanisms (e.g., co-management, local councils) are largely absent.

Table (11) Alignment Assessment – Policy area 2- Outcome 3

Criteria	Current Status in Libya	Identified Gap	Level of Alignment	Recommendations
1. *there are international Guidelines for Securing Sustainable Small-scale Fisheries appropriately applied*	Some aspects are partly implemented in national laws or policies	Guidelines not directly referenced or operationalized. Weak applications.	Weak Aligned	Integrate SSF Guidelines into revised fisheries policy; conduct national awareness campaign
2. *provisions are made for the capacity of fisheries stakeholders and institutions for participatory management of the fisheries to be developed and nurtured*	To a limited extent. While some basic provisions exist, especially through cooperatives and required consultations, Libya does not yet have a comprehensive participatory management framework. Libya has a relatively wide distribution of higher education institutions offering programs in	Weak institutionalization of fisher participation	Weak Alignment	Revise legal and policy frameworks to align with SSF Guidelines, especially regarding participation, social inclusion, and tenure rights. Strengthen and fund fisheries cooperatives as platforms for participatory governance. Develop national strategies for small-scale fisheries management with active stakeholder engagement.

	marine sciences, fisheries, and aquaculture,			Promote education and training programs on sustainable practices, market access, and governance for small-scale actors.

3.7.3. POLICY AREA 3: Sustainable aquaculture management

Policy Objective: To support sustainable aquaculture development in Africa as a means of diversifying fish supply, creating employment, improving livelihoods, and enhancing food security.

POLICY AREA 3: OUTCOME 1: Improved market-led aquaculture investments

Libya launched the National Project of Aquaculture (NPA) in 2021, aiming to revitalize and develop commercial and small-scale aquaculture. While some strategic groundwork has been laid, actual implementation remains limited. Most hatcheries and aquaculture farms are inactive due to limited public investment, insufficient infrastructure, and a lack of private sector incentives. Market-led growth is constrained by weak cold chains, fragmented value chains, and absence of certification schemes. Although the NPA has developed regulatory forms and guidelines, Libya lacks a comprehensive aquaculture law, a financial incentive framework, or a national marketing strategy for aquaculture products.

Table (12) Alignment Assessment – Policy area 3- Outcome 1

Criteria	Current Status in Libya	Gap	Alignment Level	Recommendations
1. *Market campaigns are included for aquaculture products (awareness creation, PPPPs – Price, Place, Promotion and Product*	market campaigns for aquaculture products are very limited or virtually absent, especially when evaluated against the full marketing mix framework, as aquaculture production is still in its early development stage, with limited diversity species	a significant gap in Libya when it comes to using strategic market campaigns to support aquaculture development.	Not Aligned	Launch public-private marketing campaigns and cold chain investment
2. *Aquaculture infrastructure- Are there measures for the state to provide basic infrastructure for aquaculture development*	Farms and hatcheries exist but are non-operational; rural areas lack infrastructure	Key hatchery is out of work, weak infrastructure for refrigerated storage, ice plants, fodder	Weak Aligned	Public-private partnerships (PPP) to invest in hatcheries, cold chain, and feed production.

		plants and logistics, lack of physical and digital market structures for farmed fish.		Strategic allocation of coastal and inland zones with water access and road connectivity. Investment in renewable energy (e.g., solar systems) to support remote aquaculture operations. Regional infrastructure hubs to serve clusters of small producers with shared services (hatchery, storage, etc.).
3. *Financing/investment strategy - there are strategies for the promotion of financial instruments such as guarantee funds, micro-credit institutions*	No aquaculture loans or insurance schemes; development budget irregular	Absence of microcredit, tax incentives, aquaculture-specific insurance	Not Aligned	Establish financial instruments and public-private partnerships
4. *Quality assurance and standards* - there are provisions for aquaculture product labelling and traceability through certification programs?	The National Center for Food and Drug Control (NCFDC) in Libya is the official authority responsible for monitoring the quality and safety of food and pharmaceuticals, including products of aquatic origin such as aquaculture products. also there are some initial steps and provisions considered by NPA.	No mandatory labelling schemes specific to aquaculture products. No national eco-label or third-party certification system in place. Inadequate laboratories and testing protocols for safety/residue monitoring	Partially Aligned	Develop national standards for labelling and traceability of aquaculture products, in coordination with relevant ministries such as the Ministry of Marine Wealth. Launch certification programs for aquaculture products (e.g. quality and safety labels), potentially in collaboration with international organizations such as FAO and GFCM. Enhance the technical capacity of the NCFDC by upgrading laboratory equipment and training personnel in modern analysis and traceability methods. Raise awareness among producers and

				consumers about the importance of labelling and traceability for food safety and market access.
5. *Skills development plan - there are provisions in the policy for aquaculture development plan and strategies to appropriately address competencies and skills development*	There is a plan developed under the National Project of Aquaculture, in collaboration with regional and international organizations such as the AOAD, FAO, and GFCM.	Lack of consistent national funding to sustain and expand training programs. Limited international donor support compared to other priority sectors. Weak institutional coordination for long-term vocational training and certification	Weak Aligned	Secure sustainable funding through national budget allocation or public-private partnerships (PPPs). Develop national aquaculture vocational curricula and training centers. Engage with international donors (EU, FAO, AOAD) to scale up capacity-building projects. Establish a national certification framework for aquaculture professions.
6- Research and Extension Services - there are provisions of adequate funding for research to enhance technology development and innovation?	The National Project of Aquaculture and Marine Biology Research Center (MBRC) are mandated to conduct applied research and technical studies related to: Hatchery technologies Fish feed development Water quality management Aquaculture systems (ponds, cages) Several academic institutions (e.g., universities in Tripoli, Benghazi, Omer Almokhtar) have departments focused on marine sciences and aquaculture research.	No dedicated, consistent funding stream for aquaculture R&D from the state budget. Many research facilities are outdated, lacking modern labs, equipment, or access to data platforms. Minimal connection between research institutions, the private sector, and government to stimulate innovation.	Weak Aligned	Establish a national research fund for aquaculture, with competitive grants targeting innovation and applied research. Upgrade facilities at MBRC and university research stations, including hatcheries and feed labs. Create an aquaculture extension network, linking researchers, farmers, and government advisors. Support public-private partnerships (PPPs) to commercialize research outputs (e.g., local feed, improved fry, cage systems).
7- Fish farmers associations or cooperatives- Is there the existence of an institutional	Law No. 23 of 1991 on Cooperative Societies provides a legal basis	Weak organization and representation.	Aligned	Raise awareness among farmers about the benefits and

framework to allow Fish farmers associations and cooperatives to flourish?	for establishing cooperatives, including in the fisheries and aquaculture sector. A few informal or localized groups of fish farmers operate in some regions	Many small-scale farmers lack awareness of the benefits of cooperatives or how to form them legally.		procedures of forming associations or cooperatives. Simplify the legal registration process and offer legal aid to support cooperative formation. Provide technical and managerial training for cooperative leaders and members.
8- Enabling environment : there is provision of policy and institutional framework as well as one stop shop to facilitate registrations and investments by the private sectors.	partial enabling environment for private sector investment in aquaculture and fisheries, with some institutional and policy frameworks in place. Integrated entity for private aquaculture business registration, licensing, investment support, or guidance.	No unified law, no one-stop-shop for investors. Lack of clear, formalized incentives (e.g., tax breaks, land access, subsidies) for aquaculture businesses. Limited technical, financial, or legal support for small- and medium-scale investors.	Weak aligned	Develop and publicize investment guides detailing steps, timelines, and contacts for private investors. Introduce incentives (e.g., customs exemptions, co-financing programs) to encourage private sector entry into aquaculture.
9- Growth in trade of locally produced aquaculture products- measures for the protection of local aquaculture products from imported products/ programs in place to increase competitiveness of locally produced aquaculture products	Minimal domestic production and branding; imports dominate	No protection for local producers or export readiness	Not Aligned	Integrate aquaculture into national trade policy and invest in branding

POLICY AREA 3/ OUTCOME 2: Improved regional cooperation in shared ecosystems

Libya is an active member of the General Fisheries Commission for the Mediterranean (GFCM) and participates in regional marine initiatives including WestMED, FAO MedSudMed, and the Union for the Mediterranean (UfM). While these platforms offer significant potential for aquaculture cooperation, Libya does not yet participate in transboundary disease control, genetic monitoring, or harmonized aquaculture data sharing. There is also no regional monitoring program for aquaculture effluents, animal health, or brood-stock management in collaboration with neighboring states.

Table (13) Alignment Assessment – Policy area 3- Outcome 2

Criteria	Current Status in Libya	Gap	Alignment Level	Recommendations
1- *Common strategies on management and research on transboundary Resources - harmonize coherent policies, institutional and legal frameworks for aquaculture shared ecosystems*	Libya engages in regional forums (GFCM, WestMED), but weak implementation.	No joint strategy for aquaculture disease or resource sharing	Not Aligned	Develop regional MoUs on aquaculture health and shared ecosystem protection
2 *The policies are consistent with best ecosystems management approaches (e.g. FAO, EAF, EAA, CCRF)*	current policies and strategies for fisheries and aquaculture partially align with best ecosystem-based management approaches such as the FAO Ecosystem Approach to Fisheries (EAF), Ecosystem Approach to Aquaculture (EAA), and the Code of Conduct for Responsible Fisheries (CCRF).	significant gaps in full implementation and mainstreaming No clear integration of multispecies, habitat, or trophic-level management. Focus is still sectoral, not cross-ecosystem. Weak enforcement of marine protected areas or no-take zones; insufficient integration with coastal zone planning.	Weak Aligned	Adopt a national EAF/EAA strategy with defined indicators, monitoring systems, and integration with marine spatial planning. Enhance multi-stakeholder participation, including fishers, NGOs, local authorities, and researchers in co-management models. Integrate aquaculture and fisheries planning within broader Integrated Coastal Zone Management (ICZM) frameworks. Strengthen data systems for ecological monitoring, catch statistics, and habitat condition assessments.
3- *Conformity with accreditation mechanisms- Best Management Practices required for certification and standardization for sustainable aquaculture*	No domestic certification/accreditation system	No BMPs or producer codes	Not Aligned	Adopt GFCM or FAO-aligned accreditation tools and audit protocols

practices included in the policies				

3.7.4. POLICY AREA 4: Responsible and equitable fish trade and marketing

Policy Objective: To promote intra-African fish trade, strengthen market access, ensure compliance with quality and safety standards, and enhance value chain efficiency for both small- and large-scale operators.

POLICY AREA 4/ OUTCOME 1: Improved intra and inter-regional trade

Libya's fish trade is largely underdeveloped at the regional level despite its strategic location in the Mediterranean and its potential to access African, Arab, and European markets. The country is a signatory to various international agreements, including the Barcelona Convention, and is affiliated with trade-related bodies such as the Arab Maghreb Union and Greater Arab Free Trade Area GAFTA. However, Libya's fishery trade practices are weakly harmonized with regional trade frameworks such as those of COMESA, the African Continental Free Trade Area (AfCFTA), or AU-IBAR guidelines. Domestic trade policies lack specificity on fish and aquaculture product trade, and there is no national strategy tailored to regional integration in fish marketing. This limits Libya's participation in regional fish value chains and restricts its market diversification opportunities.

Table (14) Alignment Assessment – Policy area 4- Outcome 1

Criteria for Alignment	Current State in Libya	Gap	Level of Alignment	Recommendations
1- there is compliance with agreed regional trade protocols and regulations	Libya shows partial compliance with agreed regional trade protocols and regulations, especially those related to fisheries and aquaculture, but significant institutional, legal, and operational gaps remain	Harmonization of Standards are missing, limited lab capacity, outdated testing protocols, and lack of accreditation. No recognized certification schemes for aquaculture or fish products.	Weak aligned	Harmonize national quality and food safety standards with COMESA and Codex Alimentarius guidelines to boost regional and international trade. Accredit national laboratories and strengthen SPS measures to comply with regional protocols. Streamline export and import procedures, including digitization and establishment of a one-

				stop shop for fishery and aquaculture exporters. Develop traceability and product certification systems to facilitate cross-border acceptance of Libyan products.
2- *Coherence of fish trade policies with other national trade and economic policies*	currently not fully coherent with broader national fish trade policies or with related economic, agricultural, and environmental policies. While some legal and institutional frameworks exist, policy fragmentation and weak inter-sectoral coordination limit the effectiveness of a unified fish trade strategy.	No national fish trade strategy or action plan linking production to market access, quality assurance, and export promotion. Lack of inter-ministerial coordination between marine wealth, trade, agriculture, economy, and environment sectors. Weak integration of value chain development, post-harvest systems, and marketing infrastructure in policy frameworks.	Weak alignment	Mainstream fisheries and aquaculture into national trade and investment promotion documents. Introduce incentives and investment frameworks for fish processing, cold chain, and market access.
3- *Compliance with sanitary standards and market requirements*	Libya is partially compliant with sanitary standards and market requirements, particularly for domestic markets and some regional trade. However, full compliance with international standards, especially for exports to high-value markets like the EU, is still limited due to infrastructure, certification, and traceability challenges. National Center for Food and Drug Control (NCFDC) and National Center for Animal Health	Lack of seafood quality standards, traceability systems, and laboratory certification.	Weak alignment	Supports compliance with international fish trade and sanitary standards. Crucial for Libya's ambitions to expand aquaculture exports and align with Codex Alimentarius and EU/OIE standards.

POLICY AREA 4/ OUTCOME 2: Increased competitiveness for African fish and fishery products

Libya's fisheries sector remains weakly competitive due to underinvestment in post-harvest infrastructure, low-value addition, lack of product standardization, and minimal marketing efforts. There are no dedicated fish processing zones, fish packaging centers, or certified export hubs. Moreover, the weak of quality certification and labeling systems restricts the international competitiveness of local fish products. Consumer information remains fragmented, and there is limited use of ICT for market access or price transparency. Libya lacks incentives for innovation and has not integrated ecosystem certification tools such as eco-labelling or fair-trade seafood standards.

Table (15) Alignment Assessment – Policy area 4- Outcome 2

Criteria for Alignment	Current State in Libya	Gap	Level of Alignment	Recommendations
1- *Economically efficient fisheries sector - Are fisheries sustainably managed and supported by appropriate infrastructure and prudent macroeconomic management?*	the Libyan fisheries sector shows partial progress toward being economically efficient. Libya's Mediterranean coastline and relatively low exploitation rates offer strong potential for sustainable fisheries and economic returns if managed efficiently.	Inadequate Infrastructure, Weak Macroeconomic Integration, Domestic and export markets remain underdeveloped, with low value addition, Skills and Human Capital Gaps	Partial alignment	Invest in infrastructure at landing sites. Integrate fisheries into national economic planning. Expand and fund technical training and extension services. Encourage public-private partnerships to boost market development.
2- *Standards and supportive technology*	Libya does have institutions and infrastructure aimed at standardizing and ensuring the quality of food, including aquatic products, but the system is still developing and only partially conforms to international certification guidelines.	full certification schemes (e.g., MSC, ASC, HACCP-compliant product traceability systems) are not yet widely implemented across the country.	Weak aligned	Establish a dedicated National Fisheries Quality Control Laboratory. Develop a national traceability and certification program for fish and aquaculture products. Support training of inspectors and lab technicians in international food safety standards (e.g., HACCP, ISO 22000). Invest in mobile labs or regional units to support quality control in remote areas.
3- *Competitiveness through increasing value chain efficiencies*	Most fish sold raw; limited value addition	Lack of fish processing and packaging infrastructure	Weak alignment	Incentivize fish processing SMEs and eco-labeling schemes

4- *Coherence of trade policies (harmonization) - national trade policies are coherent and harmonized at sub regional or regional levels?*	National trade policies show some degree of coherence and harmonization at the regional and sub-regional levels, though practical implementation faces challenges. Libya is unable to export to the European Union, and is still not classed as an A or B country able to export its fisheries products without restriction.	Institutional Weaknesses: Regulatory Inconsistencies: lack of capacity	Weak aligned	Establish or empower an inter-ministerial committee (Economy, Agriculture, Marine Resources, Trade) to harmonize national policies with regional trade protocols. Train Libyan trade and fisheries officials on COMESA/GAFTA/WTO trade frameworks, rules of origin, non-tariff barriers, and dispute resolution. Invest in the development or accreditation of a national reference laboratory capable of performing microbiological and chemical tests as per ISO/IEC 17025 standards. Collaborate with regional/international labs as needed. Require that all fish processing establishments and vessels implement traceability systems and Hazard Analysis and Critical Control Points (HACCP)-based food safety plans. Initiate communication with the European Commission's Directorate-General for Health and Food Safety to request a pre-assessment or audit mission. Implement Pilot Certification Program.
5- *Consumer Information - symmetric information is ensured between buyers and sellers.*	While there are positive steps toward ensuring symmetric information, including recent legal reforms and the role of regulatory bodies, Libya still lacks a fully functional system to ensure that buyers and sellers have equal and accurate	The draft law has not yet been fully enacted or implemented, meaning enforcement mechanisms are still weak. Limited awareness among consumers	Weak aligned	Establish ICT-based fish product portals; launch consumer education campaigns

	access to product information. Draft Law No. 2 of 2022 on Consumer Protection			

3.7.5. POLICY AREA 5: Regional and sub-regional cooperation

Policy Objective: To strengthen South-South (bilateral and regional) cooperation and develop coordinated mechanisms among RECs, RFBs, and LME-based commissions to ensure coherence of fisheries policies and aquaculture development, and their adoption and adaptation.

POLICY AREA 5/OUTCOME 1: International fisheries issues at regional levels are coherent and harmonized

Libya is a contracting party to several key international agreements, such as the Barcelona Convention, General Fisheries Commission for the Mediterranean (GFCM), and the RAMSAR Convention. These commitments reflect Libya's willingness to engage in international and regional fisheries governance frameworks. However, domestication of these obligations into national legislation is still limited, and there is currently no overarching national fisheries strategy that references the PFRS.

Libya participates in regional platforms like GFCM, ICCAT, the Union for the Mediterranean (UfM), WestMED, and FAO-supported projects (EastMed, MedSudMed), and cooperates with AOAD. Despite this active engagement, Libya has not yet used the PFRS as a guiding reference in its international positions or strategies. Measures to address Illegal, Unreported, and Unregulated (IUU) fishing exist, but enforcement remains weak due to the absence of robust monitoring systems and limited institutional capacity. Libya's role in shaping regional fisheries policies remains minimal, and stakeholder participation in regional forums is limited due to political instability and a lack of organized representation mechanisms.

Potential Linkages to Strengthen Alignment with PFRS:

- **GFCM ↔ PFRS**: Co-management, IUU prevention, and sustainable fisheries frameworks.
- **WestMED ↔ PFRS**: Blue Economy and aquaculture priorities.
- **AU-IBAR ↔ National Aquaculture Project**: Technical cooperation and strategic alignment.
- **AOAD ↔ AU frameworks**: Training programs and aquaculture standards.

Table (16) Alignment Assessment – Policy area 5- Outcome 1

Criteria for Alignment	Libya's Status	Alignment Level	Gap	Recommendation
1. *there Are provisions for entrenched awareness of important international instruments for sustainable fisheries management and frameworks that identify the need for their domestication in realizing sustainable fisheries management.*	Libya is party to major instruments but lacks national legal integration.	weak Aligned	Although Libya has expressed interest in aligning with sustainability frameworks, national legislation and policy documents do not yet contain clear, institutionalized mechanisms for the domestication of these instruments, or for ensuring their operationalization at national and local levels.	Develop a national awareness strategy focused on key international instruments (e.g., FAO Code of Conduct, PSMA, SSF Guidelines). Translate and disseminate international instruments in Arabic and conduct local-level awareness sessions. Establish institutional mechanisms within the Ministry of Marine Wealth or equivalent bodies to monitor alignment with international standards..
2- there are measures in place to address Illegal, Unreported and Unregulated (IUU) fishing	Libya has laws and regulations prohibiting illegal fishing, unauthorized gear, and unlicensed foreign vessels in its Exclusive Economic Zone (EEZ). - Coast Guard and Navy, but its resources are primarily focused on maritime security and migration, limiting its capacity for fisheries enforcement.- committed to GFCM's regional plans of action and data reporting requirements,.	Weakly Aligned	No national VMS, limited electronic reporting, unregulated artisanal fisheries. no direct reference to IUU fishing as a formal concept.	Strengthen MCS infrastructure and develop a national IUU strategy.
3. Mechanisms to address seafood fraud	NCAH and FDCC. While these institutions exist, mechanisms, electronic traceability systems, and strict enforcement against mislabeling or substitution of seafood are not yet fully institutionalized or widely applied in Libya..	Partially Aligned	Libya does not explicitly integrate PFRS principles in international fora.	Use regional platforms to incorporate PFRS in policy discussions. Coordination between the National Center for Animal Health and the Food Quality Control Center could be leveraged to build a more robust anti-fraud system

POLICY AREA 5/OUTCOME 2: RECs and RFBs as Positive Forces for Fisheries Management

Although Libya is not formally integrated into a recognized African REC such as ECOWAS or SADC, it is a member of COMESA and actively engages in RFBs like GFCM. However, there is no structured linkage between Libya's REC and RFB engagements, nor is there a strategy connecting these regional mechanisms to national fisheries development.

Libya lacks bilateral or multilateral conflict resolution mechanisms, despite sharing migratory fish stocks with neighboring countries. While maritime zones like the EEZ (Decree No. 260 of 2009) and Fisheries Protection Zone (Decree No. 37 of 2005) have been declared, cooperative enforcement mechanisms are lacking.

Table (17) Alignment Assessment – Policy area 5- Outcome 3

Criteria for Alignment	Libya's Status	Alignment Level	Gap	Recommendation
1. Mechanisms linking RECs and RFBs	Engages in GFCM, AOAD, WestMED, UfM, and COMESA, but with no formal linkage strategy.	*Partially Aligned*	No interlinkages or harmonization between REC and RFB engagements.	Establish MoUs and inter-ministerial coordination to integrate REC and RFB efforts.
2. Role of RECs and RFBs in fisheries promotion	Their role is informally acknowledged but not embedded in national policy.	*Partially Aligned*	No clear institutional mandate for collaboration.	Define roles of RECs/RFBs in future fisheries strategies and policies.
3. Regional conflict prevention and resolution mechanisms	Libya has declared zones but no cooperative conflict resolution structures.	*Not Aligned*	No protocols with neighboring states for shared stock management.	Develop bilateral and regional cooperation agreements under AU or GFCM frameworks.

3.7.6. POLICY AREA 6: Awareness enhancing and human capacity development

Policy Objective: To strengthen sectoral competencies, enhance institutional and individual capacities, promote continuous learning, and improve evidence-based decision-making in the fisheries and aquaculture sector in Libya.

POLICY AREA 6/ OUTCOME 1: Enhanced sectoral competencies and proficiencies

Libya's fisheries and aquaculture sectors suffer from a significant shortage of skilled personnel, outdated educational curricula, and limited institutional capacity for training and mentorship. While the National Project for Aquaculture has conducted several short-term technical training programs

in collaboration with AOAD, GFCM, and FAO, these initiatives remain fragmented and insufficient to meet national needs. Most trainings are not continuous, lack follow-up, and are often limited to project-based cycles with no permanent training institutions established.

There is no national framework for continuous professional education, nor a system of accreditation for practitioners. Institutional accreditation is weak, and there are no established centers of excellence focused on fisheries or aquaculture in Libya, despite the potential for their development within universities or through public-private cooperation.

Existing university programs offer limited specializations in aquaculture or fisheries, and suffer from underfunding, poor infrastructure, and weak links to industry. Mentorship opportunities are virtually nonexistent. Without structured capacity development plans and a pipeline for skilled professionals, the sector remains stagnant.

Table (18) Alignment Assessment – Policy area 6- Outcome1

Criteria for Alignment	Libya's Status	Gab	Level of Alignment	Recommendation
1. *Continuous professional education, mentorship and training*	there are partial provisions in Libya to facilitate continuous awareness, training, and an enabling environment for sectoral development in fisheries and aquaculture	no national frameworks for continuous professional education or mentorship. public and private sector do not receive regular, structured capacity-building programs. Weak Vocational Infrastructure:	Weak alignment	Establish a National Training and Capacity Development Framework. Allocate a dedicated budget from national resources and explore blended financing (e.g., partnerships with FAO, GFCM, AU-IBAR, and private sector). Update and Align Curricula with Market Needs. Integrate Training into Licensing and Business Support
2. *Accreditation of practitioners and institutions - there are provisions for relevant stakeholders/institutions to be accredited to maintain relevance*	No formal national accreditation system	Lack of recognized certification mechanisms for training centers or individual skill assessments. Absence of partnerships with educational accreditation bodies to ensure quality and relevance of	Not alignment	Require all technical training institutions (public or private) to be registered and accredited based on criteria such as curriculum relevance, trainer qualifications, and infrastructure. Design and implement mandatory CPD programs to ensure practitioners remain up-to-date with modern practices and technologies.

		aquaculture and fisheries curricula.		Collaborate with AU-IBAR, FAO, and the African Continental Qualifications Framework to ensure Libya's accreditation aligns with continental standards and facilitates regional labor mobility.
3. *Facilitate centers of excellence of fisheries and aquaculture*	No formal centers of excellence; universities have weak capacity. Potential exists if national plans prioritize their development.	Absence of formally recognized centers of excellence in fisheries or aquaculture. No policy mandate or budget allocation to support their creation and sustainability. Weak coordination between research institutions, private sector, and training providers. No quality assurance framework or operational standards defined for excellence.	Weak alignment	Designate and Invest in National Centers of Excellence. Link Libyan institutions with regional centers of excellence. Secure funding through national budgets, the EU, AU-IBAR, and regional initiatives like WestMED and PRIMA to support development and recognition of centers.

POLICY AREA 6/ OUTCOME 2: Improved evidence-based decision making

Policy-making in Libya's fisheries and aquaculture sectors is often reactive and not grounded in systematically collected data. Although some data is gathered by the National Project for Aquaculture and supported by international organizations, the lack of centralized databases, national knowledge platforms, or policy think tanks limits its effective use. Coordination between researchers, policymakers, and sector stakeholders is weak. There are no structured platforms for policy dialogue or data dissemination. This weakens the relevance of policies to real community needs, particularly in rural or coastal fishing communities. The absence of participatory mechanisms also inhibits the ability of policymakers to respond to the evolving social and economic context of fishers and aqua-entrepreneurs.

Efforts to align with climate adaptation and regional frameworks exist in principle, but are not supported by evidence-based planning or local data analytics

Table (19) Alignment Assessment – Policy area 6- Outcome 2

Criteria for Alignment	Libya's Status	gap	Level of Alignment	recommendation
1. information-based policy decision is making evident in the policy	Libya has a central institution, the General Information Authority (GIA), mandated with collecting, analyzing, and disseminating data for planning and policy-making. However, information-based decision-making in the fisheries and aquaculture sector is weak.	Lack of fisheries/ aquaculture-specific data systems or integration with GIA's national datasets. No national framework for Monitoring, Evaluation, and Learning (MEL) in fisheries and aquaculture policy.	Weak aligned	Ensure that aquaculture licensing databases, vessel registries, and catch monitoring systems are connected to the GIA's platform. Work with FAO, AU-IBAR, GFCM, and others to improve data ecosystems and introduce digital tools for evidence-based governance.
2. What provisions exist to facilitate information sharing between policy makers and consumers?	Formal provisions for structured information sharing are limited and fragmented. The National Project of Aquaculture has started to develop forms and handbooks for licensing and operations, which are shared with practitioners, but this is largely administrative and does not extend to policy engagement or feedback loops.	Lack of regular public reporting from ministries or the GIA on sectoral performance, strategic priorities, or policy changes. Weak digital infrastructure for publishing real-time or interactive information. Limited participation of stakeholders in the drafting, reviewing, or evaluating of fisheries and aquaculture policies.	weak aligned	Create a national platform for fisheries and aquaculture where laws, strategies, statistics, and reports are regularly published and accessible. Ministries should release biannual policy updates summarizing goals, achievements, and upcoming initiatives, shared with associations and cooperatives. Ensure that the fisheries and aquaculture sector is formally represented in GIA's national reporting and open data strategy.

3.7.7. POLICY AREA 7: High seas fisheries

POLICY AREA 7/ Outcome 1: Greater African voice in high seas fisheries:

Libya has made partial progress toward aligning with international frameworks governing high seas fisheries. The country is a party to the United Nations Convention on the Law of the Sea (UNCLOS), which provides a legal basis for participation in international maritime governance and resource management. However, Libya has not ratified the FAO Port State Measures Agreement (PSMA), limiting its capacity to fully participate in global efforts against Illegal,

Unreported, and Unregulated (IUU) fishing. There is also limited evidence of active engagement in Regional Fisheries Management Organizations (RFMOs) or similar bodies, and no formal mechanisms for inter-agency or donor coordination targeting fisheries governance have been institutionalized. This results in a **partial alignment** with the Policy Framework and Reform Strategy (PFRS) for fisheries, with critical gaps in implementation and international cooperation.

Table (20) Alignment Assessment – Policy area 7- Outcome 1

Criteria	Current State	Gap /	Level of Alignment	Recommendation
1- *a. there is an avenue for effective participation in international deliberations, meetings, etc., and access to high seas fisheries*	Occasional participation, but not consistent or well-resourced in international fisheries meetings/deliberations Libya is a party to UNCLOS (ratified in 2005), and PSMA (ratified 2018) providing a legal basis for EEZ management; limited participation in RFMOs. Libya signed UNFSA in 1995, but no confirmation of full implementation. Compliance with the FAO Compliance Agreement (1993). Engagement in ICCAT.	Partial alignment legal framework exists but weak institutional engagement. Limited technical engagement and reporting mechanisms.	alignment	Establish a national committee to coordinate participation in RFMOs; appoint official delegates to international fisheries meetings. Ensure effective implementation through updated national legislation and enforcement capacity.
b. provisions have been made for Libya to become a member/cooperating party of appropriate RFMOs.	Libya has made provisions and taken steps to become a member or cooperating party of appropriate Regional Fisheries Management Organizations (RFMOs) relevant to its geographical location and fishing interests. Participation is maintained through national focal points, coordinators and hubs, and attendance at meetings and committees.	Limited technical and institutional capacity to actively influence decision-making and negotiations in RFMOs. Lack of systematic follow-up on recommendations and compliance obligations. Limited data and stock assessment capacity, which weakens Libya's voice in scientific	alignment	Initiate accession process or observer status in relevant RFMOs managing Mediterranean and adjacent waters. Strengthen institutional capacity (technical staff, training, data systems) to fully participate in and benefit from RFMO activities. Improve fisheries data collection and reporting, especially for species under RFMO control, to reinforce Libya's case

		discussions and quota allocations.		for quota shares or conservation exceptions.
c. *there are modalities/provisions for Libya to ratify UNCLOS and the PSMA.*	Libya ratified the (UNCLOS) in 1985, establishing its rights and responsibilities over maritime zones, including its (EEZ).Libya acceded to the (PSMA) in December 2018, committing to prevent, deter, and eliminate IUU fishing through effective port state measures.	Weak national legislative alignment, Weak institutional capacity	alignment	National laws and regulations may require updates to fully align. Invest in training programs for relevant authorities to enhance skills in inspection, monitoring, and enforcement related to IUU fishing.
2- *there are mechanisms for aligning donor and partner efforts with the PFRS?*	Some collaboration exists with international partners like FAO, GFCM, and AU-IBAR, mostly through project-based support, such as technical assistance, training, or short-term development programs.	No clear national coordination platform or mechanism ensures donor support Limited integration of PFRS principles into national fisheries strategies	Low alignment	Establish an inter-ministerial platform for fisheries sector coordination; integrate donor mapping into national fisheries policy.
3- *there are provisions for coordination of development partners' efforts with PFRS?*	there are no explicit provisions in Libya's national fisheries and aquaculture policies that directly aim at strengthening the alignment and coordination of development partners' efforts with the PFRS	Lack of a national coordination mechanism that brings together stakeholders, including development partners, around a unified strategy aligned with the PFRS.	Low alignment	Develop guidelines for donor alignment with national fisheries priorities; integrate coordination function into existing ministry or agency

POLICY AREA 7/ Outcome 2: Increased participation and benefits for member states in high seas fisheries

Libya's national policies offer limited provisions to promote active economic participation in high seas fisheries or to generate direct benefits for the country through such activities. While the ratification of UNCLOS grants the country sovereign rights over its Exclusive Economic Zone (EEZ), no clear policy instruments or programs are in place to facilitate Libyan fishing operations or investments in high seas fisheries. There is also a lack of infrastructure (e.g., dedicated harbors, landing sites) or incentives to attract investment in value addition and support the industry's

expansion beyond national waters. The alignment with the Policy Framework and Reform Strategy (PFRS) under this outcome is therefore low to partial, and significant development is needed to close the gap.

Table (21) Alignment Assessment – Policy area 7- Outcome 2

Criteria	Current State	Gap /	Level of Alignment	Recommendation
1- *there is a provision in the policy ensuring high seas resource exploitation by Libya.*	There is no explicit provision that guarantees or facilitates Libya's access to high seas fisheries or exploitation of such resources by Member States (MS) under a regional or international framework.	Absence of national legal or policy instruments targeting high seas access or participation in shared international stocks.	Weak alignment	Develop a national strategy for high seas fisheries participation; Invest in capacity building to understand and manage high seas fisheries legally, technically, and sustainably. Align national policy with international best practices, including UNCLOS and FAO instruments on high seas governance.
2- *there programs and strategies proposed to increase investment for economic value addition (e.g., harbors, processing)?*	Libya has existing port infrastructure used for both commercial and fishing purposes. The General Authority for Marine Wealth and National Project of Aquaculture have occasionally proposed modernization efforts, but no comprehensive national strategy exists that specifically targets economic value addition from high seas fisheries.	the strategic investment framework for economic value addition linked to high seas fisheries are unclear and no follow up for any the designed plans. Inadequate port infrastructure tailored for handling high seas catches, transshipment, or value-added processing.	Weak alignment	Integrate fisheries infrastructure needs into national investment plans; seek public-private partnerships to develop ports and processing facilities

POLICY AREA 7/ Outcome 3: Active participation of member states in RFMO processes and agendas

Libya currently exhibits very limited participation in Regional Fisheries Management Organizations (RFMOs) or other cooperative regional arrangements responsible for high seas fisheries governance. While it holds legal rights under UNCLOS, no institutional mechanisms or formal participation have been identified in the Mediterranean RFMO or equivalent bodies.

Additionally, modalities for joining new partnerships or engaging in intergovernmental cooperation are absent or underdeveloped.

Table (22) Alignment Assessment – Policy area 7- Outcome 3

Criteria	Current State	Gap	Level of Alignment	Recommendation
1- *there are provisions facilitate management decisions for active roles in intergovernmental cooperation*	There are national focal points (e.g., in the Ministry of Marine Wealth or Environment) who represent Libya in technical and strategic meetings. Libya endorses and contributes to regional plans	Data-sharing, enforcement cooperation, and resource allocation mechanisms are poorly defined, leading to fragmented implementation.	Weak alignment	Establish legal mandates and institutional structures to support Libya's engagement in RFMOs; assign focal points for regional cooperation. Create a shared data and reporting platform to support Libya's input to regional scientific assessments and policy dialogues. Strengthen the capacity of focal points through training on international fisheries law, negotiation, and diplomacy.
2- *there are modalities guiding participation in newly established partnerships*	Libya participates in several new or evolving regional initiatives, such as: WestMED Initiative, GFCM 2030 Strategy, FAO Regional Projects such as MedSudMed and EastMed –AOAD – including technical training on aquaculture. Libya's participation is typically managed through national experts or focal points in ministries (Marine Wealth, Environment) or specific projects (e.g. National Project for Aquaculture).	There are no codified national policies or legal instruments that define how Libya joins or benefits from such partnerships. Lack of institutional continuity: Participation often depends on personal connections or temporary project funding, with limited follow-through.	weak alignment	Draft a formal policy or procedural framework for evaluating, joining, and sustaining engagement in regional and international fisheries partnerships. Create a national stakeholder coordination platform involving government, academia, private sector, and NGOs to support Libya's roles in evolving fisheries partnerships.

3.5.8. POLICY AREA 8: Crosscutting issues in African fisheries and aquaculture

A. Strengthening resilience to climate change in fisheries and aquaculture:

Libya faces significant climate-related threats to its fisheries and aquaculture sector. While isolated pilot projects (e.g., aquaponics in Zuwara) and early weather alerts exist, there is no systemic approach to climate-smart fisheries. Key gaps include the absence of vulnerability mapping, tailored early warning systems (EWS), and integration of climate adaptation into sector policies. Overall alignment with PFRS goals in this area is **very limited**, requiring foundational reforms in planning, capacity building, and risk management.

Table (23) Alignment Assessment Climate Resilience in Fisheries and Aquaculture

Criteria	Current State in Libya	Gap	Level of Alignment	Recommendation
OUTCOME 1: Adaptive capacity and resilience at the local level built				
1- *Capacity-building programme on climate-smart fisheries*	Short-term, donor-driven trainings occur (e.g., FAO, UNDP); youth-focused skills mentioned in Marine Wealth Plan.	No national curriculum or long-term training strategy for climate-smart fisheries.	weak Alignment	Establish a government-led climate-smart fisheries capacity building program with sustainable funding.
2- *Communication systems- there are systems on participatory Climate Change (CC) and Disaster Risk (DR) vulnerability assessment and aquaculture development*	General coastal risk assessments exist but exclude fishers.	Lack of fisheries-specific community-based vulnerability mapping. Limited integration of climate change in fisheries education and extension services.	not Alignment	Develop localized VCAs (Vulnerability & Capacity Assessments) involving coastal fishers and aquaculture stakeholders. Use FAO or UNDP toolkits for standardization.
3- *Facilitate the creation of alternative livelihoods - there are available opportunities for at least temporary shifting to alternative occupation in the event of shocks*	There is no structured national policy or safety net supporting fishers or aquaculture workers in case of climate shocks, environmental degradation, or economic disruptions. Temporary alternative livelihoods are generally informal, such as small trade, agriculture, or unskilled labor.	Lack of formal mechanisms for social protection or alternative livelihood support in the fisheries sector. No integration of resilience strategies or diversification plans in national fisheries policies.	Weak alignment	Integrate skills training into existing fisheries development plans to build capacity for shifting when needed. Promote micro-financing and entrepreneurship schemes targeting coastal communities, with priority to vulnerable groups. Include alternative livelihoods as a

	No specific programs exist under the fisheries or aquaculture authorities to enable transition or skill development for alternative occupations.	Women and youth are particularly vulnerable due to limited access to training or credit.		component in climate adaptation strategies and donor-funded programs.
4- *Early warning systems for climate impacts*	General alerts issued by Libyan Met Office, but not fisheries-specific. Libya lacks a dedicated early warning system (EWS) tailored to the fisheries and aquaculture sectors.	Weak integration of fisheries authorities into national disaster risk reduction (DRR) plans. Lack of community-level training or simulation exercises related to early warning and emergency response.	Weak alignment	Establish a marine-focused early warning unit within the Ministry of Marine Wealth or in collaboration with the National Meteorological Centre. Integrate fisheries and aquaculture data into national disaster risk management frameworks. Promote community-based early warning protocols, especially in vulnerable coastal fishing villages.
5- *Integration of fisheries in DRM & CCA policies*	Currently, no formal disaster-related insurance schemes exist specifically for the fisheries or aquaculture sectors in Libya. Compensation after disasters is limited and not institutionalized.	Lack of sector-specific insurance products (e.g., for storm damage, fish stock loss). Absence of legal or policy frameworks to support compensation or insurance coverage for fishers and producers. No public-private insurance partnership model in place.	Weak alignment	Initiate policy dialogue to create a legal foundation for fisheries/aquaculture disaster insurance. Explore micro-insurance schemes and public-private partnerships with insurance companies. Develop pilot programs targeting small-scale fishers to test feasibility. Seek regional cooperation or support (e.g., FAO, African Risk Capacity) to design and implement insurance tools.
OUTCOME 2: Policy coherence and coordination at the national and regional levels improved				
1. *the Disaster risk management (DRM) and Climate Change*	DRM/CCA strategies in Libya are primarily sector-general (agriculture,	No cross-referencing or sectoral inclusion	Not aligned	Revise national CCA/DRM plans to explicitly integrate

Adaptation (CCA) policies include fisheries and aquaculture	water, infrastructure), omitting fisheries/aquaculture. The Draft Climate Strategy (2023) discusses coastal vulnerability but makes no reference to fishers or marine livelihoods. The Marine Wealth Plan 2022–2024 does not mention climate adaptation explicitly; its focus is infrastructure and productivity.	of fisheries in national climate or risk management strategies.		fisheries and aquaculture resilience planning.
2. *Fisheries and aquaculture policies include DRM and CCA*	Fisheries and aquaculture documents, refer to sustainability and stock monitoring, but lack DRM/CCA strategy, terminology, or budget planning. DRM and CCA policies exist but not yet integrate fisheries or aquaculture. Libya's ratification of the UNFCCC, the Paris Agreement, and the CBD and RAMSAR Conventions provides a strong international framework to support integration.	Institutional intent exists, but there is no execution mechanism, no cross-sectoral policy dialogue, and no monitoring framework.	Weak alignment	Add climate adaptation actions and budgets into the fisheries and aquaculture development agenda
3. *there are policies for marine spatial planning?*	The Marine Wealth Plan discusses strategic fishing zones and coastal infrastructure locations (ports, hatcheries, aquaculture sites), but this does not constitute a marine spatial planning framework. No legal or inter-sectoral coordination mechanism exists for allocating marine space (e.g., between tourism, fishing, aquaculture, and conservation).	Absence of multi-sectoral coordination and spatial allocation for marine use.	Weak alignment	Develop and legislate an MSP strategy involving fishery, environment, and coastal zone stakeholders.

B. Gender and youth inclusion in fisheries and aquaculture:

Gender equity and youth empowerment in Libya's fisheries sector remain underdeveloped. While small grant schemes and pilot aquaculture sites exist, there are no structured support mechanisms for women or youth. The country lacks secure tenure rights, targeted training, or gender-responsive financing instruments. Alignment with the PFRS's social inclusion priorities is currently very limited, highlighting an urgent need for legal reforms, quotas, and youth-led enterprise programs.

Table (24) Alignment Assessment -Gender and Youth in Fisheries and Aquaculture

Criteria	Current State in Libya	Gap	Level of Alignment	Recommendation
1- *policies and interventions aim at attracting women and youth*	Marine Wealth Plan discusses local job creation but lacks any gender/youth-specific programs or quotas.	No institutionalized framework for inclusive engagement.	Weak alignment	Establish a national youth and gender strategy for fisheries with incubator programs and targeted grants.
2- *they address key barriers to entry and access to land and water*	Coastal and aquaculture site access is opaque, with no tailored support for youth or women.	Legal and financial barriers unaddressed; no sector-specific access schemes exist.	Weak alignment	Develop gender-responsive access models (e.g., concessional leases, women-focused microloans).
3- *the policy ensure security of investment and market certainty*	No legal framework for secure investment in fisheries; annual leasing without renewal guarantee.	High risk discourages long-term investment and market entry.	Weak alignment	Draft a Fisheries Investment Security Act with tenure rights, co-investment incentives, and legal clarity.

C. Private sector investment and financing mechanisms:

Libya's investment climate poses serious challenges for private sector engagement in fisheries and aquaculture. Ranked near the bottom globally on ease of doing business, the country lacks tailored incentives, data systems, and national best practice codes. There is minimal engagement with global competitiveness frameworks or performance benchmarking. The level of alignment with PFRS expectations is very limited, and reforms are needed in digital governance, sector-specific PPP frameworks, and investor protections.

table (25) Alignment Assessment - Private sector investment and financing mechanisms

Criteria	Current State in Libya	Gap	Level of Alignment	Recommendation

1- *World Bank Ease of Doing Business Index*	Libya ranks 186/190; bureaucratic and inefficient environment for business formation and operation.	No sector-specific facilitation for fisheries or aquaculture enterprises.	weak Alignment	Establish a digital one-stop licensing and support portal for fisheries entrepreneurs.
2- *Global Competitiveness Report (WEF)*	Libya is not included in recent WEF reports due to data and institutional gaps.	No competitiveness tracking or policy targeting sectoral performance.	Not Alignment	Join WEF indices and launch a fisheries competitiveness reform program under Ministry of Economy.
3- *World Bank Fisheries Performance Indicators (FPIs)*	No monitoring of productivity, livelihoods, sustainability, or profitability in the fisheries sector.	Lack of structured data collection and reporting system aligned with FPIs.	Weak Alignment	Adopt FPI methodology for fisheries performance assessment and publish annual dashboards.
4- *Awareness of diversity of business structures - there are provisions for awareness creation that enable practitioners and enterprise owners*	Libya's private sector environment is dominated by informal, small-scale operators, with limited exposure to structured business models.	Lack of training, legal support, and awareness of enterprise models suitable for fisheries.	Weak alignment	Launch enterprise literacy campaigns through the Marine Authority; develop cooperative and PPP toolkits.
5- *policies are consistent with efficient structures enabling best practices*	No national BMP/GAP codes or inspection frameworks. Marine Wealth Plan focuses on infrastructure, not standards.	Absence of codified, enforced best practices aligned with FAO or international aquaculture norms.	Weak Alignment	Develop national BMP and GAP codes for fisheries/aquaculture based on FAO standards, with monitoring systems.

3.6. Summary of alignment assessment of Libya's fisheries and aquaculture policies with the PFRS

This review utilized the Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa as a benchmark, supported by the AU-IBAR implementation guide and various international and regional instruments. The analysis drew on a combination of policy document reviews: including the *Strategic Plan of the Ministry of Marine Wealth (2017–2022), the Implementation Plan for the National Aquaculture Project in Libya 2022-2026, Executive Regulations of Law No. 14 (1989), the National Monitoring Program for Biodiversity (2016),* and

data collected from stakeholder surveys with 12 respondents from across the fisheries and aquaculture sector.

The alignment assessment covered eight policy areas, each with specific outcomes. The findings show moderate to low levels of alignment, particularly in areas related to aquaculture investment, small-scale fisheries integration, and private sector engagement. While some outcomes in conservation and monitoring (Policy Area 1) and high seas participation (Policy Area 7) show moderate alignment, major gaps exist in the domestication and implementation of international agreements, the development of value chains, and regional cooperation mechanisms.

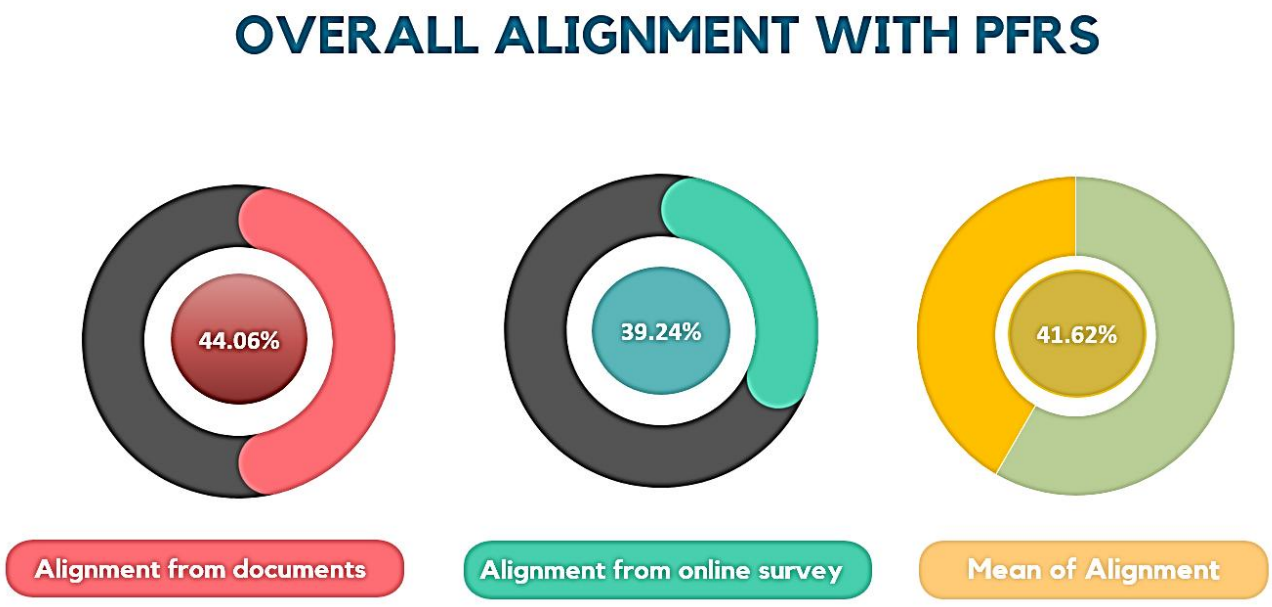
Challenges include outdated legal frameworks, lack of harmonization with regional standards, fragmented institutional mandates, and limited data systems. However, Libya's active participation in GFCM, WestMED, and AOAD and recent national initiatives like the National Aquaculture Project indicate growing momentum for reform. Recommendations include updating national fisheries policies to reflect PFRS principles, enhancing regional and inter-ministerial cooperation, institutionalizing participatory governance models, investing in capacity building, and promoting alignment with international frameworks.

Table (26) Summary of Alignment Scores Across Policy Areas and Outcomes

Policy Area	Outcomes	(%) Alignment from online survey		(%)National policy documents	
Policy Area 1: Conservation And Sustainable Fisheries And Aquaculture Resource Use	Outcome 1: Policies, frameworks and tools in place to sustainably increase national benefits from fisheries and aquaculture	**37.75**	**47.27%**	**45.83%**	**65.27%**
	Outcome 2: Effective and sustainable national and regional Monitoring, Control and Surveillance systems in place to ensure that sustainable benefits are realized	**41.6%**		**50%**	
	Outcome 3: Healthy ecosystems to support sustainable fisheries and aquaculture	**62.46%**		**100%**	
Policy Area 2a: Small Scale Fisheries Development	Outcome 1: Role and importance (contribution) of fisheries for improved livelihoods, food and income of small-scale fishing communities and related operators are evident, recognized and secured in Member States	**31.22%**	**39.47%**	**12.5%**	**29.16%**
	Outcome 2: Bilateral and regional cooperation for effective management of shared	**39.55%**		**25%**	

	fishery resources and ecosystems is strengthened				
	Outcome 3: Fishers are organized to foster good fisheries governance, sustainable development and responsible use of natural resources	**47.65%**		**50%**	
Policy Area 3: Sustainable Aquaculture Management	Outcome 1: Improved market-led aquaculture investments	**41.63%**	**35.47%**	**50%**	**33.3%**
	Outcome 2: Improved regional cooperation in shared ecosystems	**29.31%**		**16.6%**	
Policy Area 4: Responsible And Equitable Fish Trade And Marketing	Outcome 1: Improved intra and inter regional trade	**36.06%**	**35.52%**	**50%**	**50%**
	Outcome 2: Increased competitiveness for African fish and fishery products	**34.98%**		**50%**	
Policy Area 5: Regional And Sub-Regional Cooperation	Outcome 1: International fisheries issues at regional levels are coherent and harmonized	**34.7%**	**37.45%**	**50%**	**50%**
	Outcome 2: RECs and RFBs are positive forces for fisheries management within the framework of regional economic and political integration agenda	40.2%		50%	
Policy Area 6: Awareness Enhancing And Human Capacity Development	Outcome 1: Enhanced sectoral competencies and proficiencies	**36.06%**	**40.93%**	**33.33%**	**41.65%**
	Outcome 2: Improved evidence-based decision making	**45.8%**		**50%**	
Policy Area 7: High Seas Fisheries	Outcome 1: Greater African Voice in high seas fisheries	**53.34%**	**48.24%**	**80%**	**60%**
	Outcome 2: Increased participation and benefits for MS in high seas fisheries	**50%**		**50%**	
	Outcome 3: Active participation of MS in RFMOs processes and agenda	**41.4%**		**50%**	
Policy Area 8: Cross Cutting Issues in African Fisheries And Aquaculture	A. Strengthening resilience and reducing vulnerabilities to climate change in African fisheries and aquaculture		**29.63%**		**23.16**
	OUTCOME 1: Adaptive capacity and resilience at the local level built	**29.16%**		**10%**	
	OUTCOME 2: Policy coherence and coordination at the national and regional levels improved	**36.06%**		50%%	
	B. Gender and Youth				

	OUTCOME 1: Increased access to resources	**27.7%**		**50%**	
	C. Private Sector Investments and Financing Mechanisms for Fisheries and Aquaculture in Africa				
	OUTCOME 1: Improved enterprise performance within the fisheries and aquaculture sector	**28.1%**		**25%**	
	OUTCOME 2: Improved private sector governance	**29.1%**		0%	
OVERALL ALIGNMENT WITH PFRS (%)			**39.24%**		**44.06%**



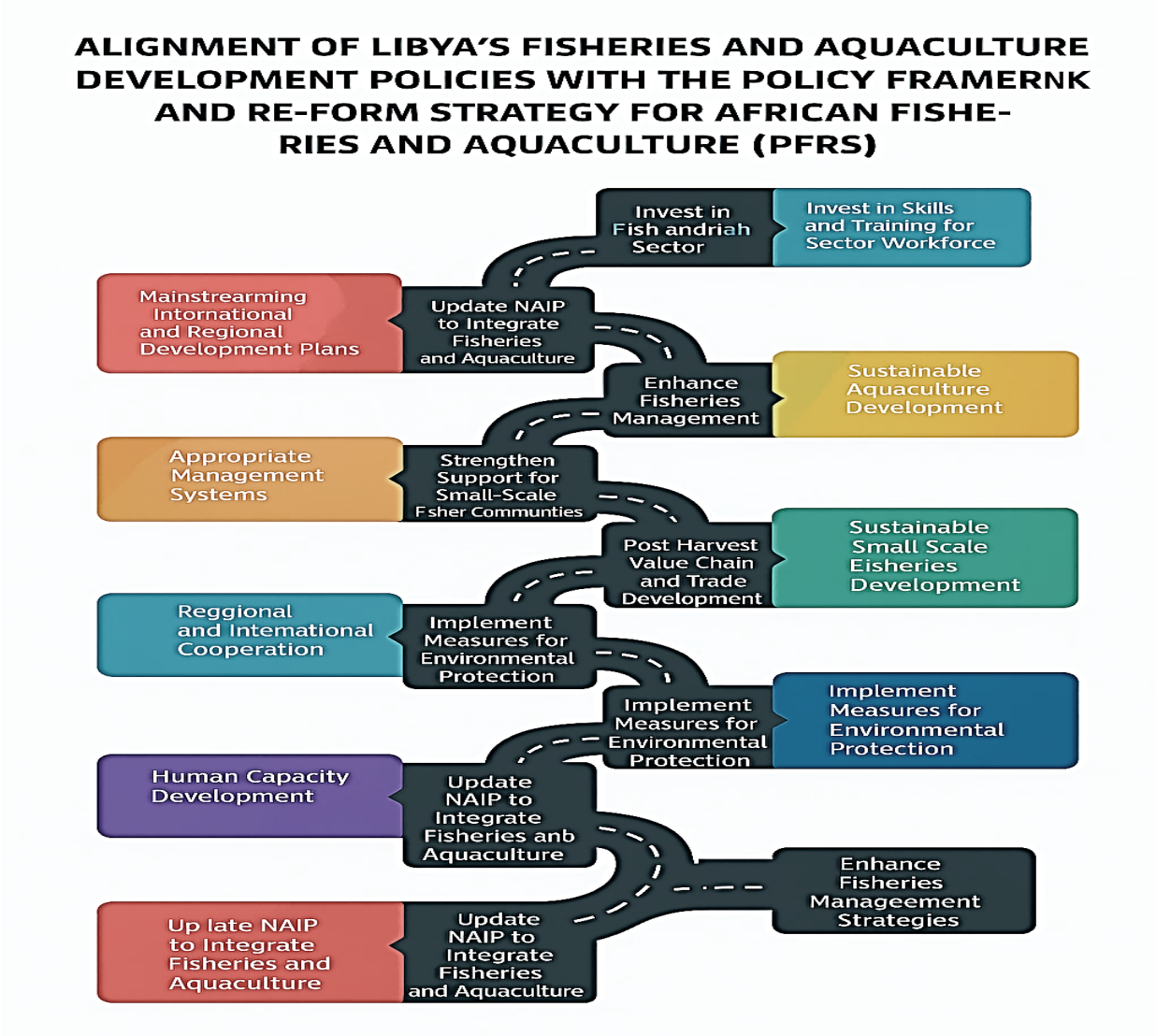
3.7. Conclusion and Recommendations

3.7.1. Conclusion

The evaluation of Libya's fisheries and aquaculture sector reveals both substantial potential and significant systemic weaknesses. Despite possessing one of the longest Mediterranean coastlines and abundant marine biodiversity, the sector remains chronically underdeveloped due to outdated regulatory frameworks, fragmented institutional structures, limited private sector participation, and insufficient investment in infrastructure, monitoring, and climate resilience.

The current legal foundation, centered on Law No. 14 of 1989, is narrowly focused on marine fishing and fails to address modern-day imperatives such as aquaculture regulation, value chain development, environmental sustainability, or inclusive governance. There is a marked absence of integrated strategies for climate adaptation, youth and gender participation, or investment incentives, factors that are now global benchmarks for responsible marine resource management.

Figure (8) conceptual framework of the national policy alignment with PFRS



Libya's policy and institutional frameworks exhibit *low to weak alignment* with most of the eight thematic areas of the African Union's Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS). While initiatives like the National Aquaculture Project (NPA) signal intent to expand aquaculture and marine farming, implementation remains superficial without

cohesive enabling legislation, secure tenure systems, or financial instruments tailored to the sector.

Moreover, the lack of Monitoring, Control, and Surveillance (MCS) infrastructure, reliable data systems, or participatory co-management structures severely undermines Libya's capacity to sustainably govern its marine wealth. Regional cooperation remains passive, with Libya not fully capitalizing on its memberships in bodies such as GFCM, WestMED, or ICCAT.This policy inertia has stifled not only the growth of the sector but also its contribution to food security, rural livelihoods, employment generation, and ecological resilience.

3.7.2. Recommendations

a) Modernize the Legal Framework

- Update and reform Law No. 14 (1989) and adopt a comprehensive marine resources and aquaculture Law, integrating sustainable fishing, aquaculture, value-chain development, biosecurity, and international compliance.
- Include definitions and provisions for licensing systems, enforcement protocols, and delineation between artisanal, industrial, and aquaculture operations.
- Enshrine ecosystem-based management, co-management models, and the precautionary principle in law.

b) Strengthen Sustainability and Conservation Mechanisms

- Legislate the establishment of Marine Protected Areas (MPAs) and enforce no-take zones in overfished regions.
- Ban destructive fishing methods and introduce incentives for adopting selective gear technologies.
- Integrate Libya's marine governance with global treaties like UNCLOS, the FAO Code of Conduct, and the Port State Measures Agreement (PSMA).

c) Institutional Reform and Capacity Building

- Empower the General Authority of Fishery and the National project of Aquaculture with budgetary independence, skilled technical staff, and decentralized offices for local implementation.
- Formalize stakeholder platforms, especially small-scale fisher cooperatives, into decision-making processes to fulfill PFRS participatory governance goals.
- Develop joint institutional programs between universities, ministries, and research centers to support innovation and policy integration.

d) Boost Scientific Research and Data-Driven Decision Making

- Scale up investment in the (MBRC) and other national observatories to support stock assessments, climate monitoring, and aquaculture viability.
- Establish a national fisheries and aquaculture database to track catch volumes, species distribution, socio-economic indicators, and compliance metrics.
- Institutionalize periodic scientific reviews to guide adaptive management and inform annual regulatory updates.

e) Facilitate Private Sector Participation and Investment

- Create a national aquaculture and fisheries investment policy with tax incentives, seed capital programs, and export support mechanisms.
- Encourage Public-Private Partnerships (PPPs) in cold chain logistics, hatchery development, and fish processing infrastructure.
- Streamline licensing and regulatory approvals through a single-window digital portal.

f) Enhance Monitoring, Control, and Surveillance (MCS) Systems

- Introduce Vessel Monitoring Systems (VMS) and electronic logbooks for industrial and semi-industrial fleets.
- Establish a dedicated fisheries inspection unit, trained and equipped for coastal and port enforcement.
- Enforce deterrent penalties for illegal, unreported, and unregulated (IUU) fishing, based on international best practices.

g) Align with Regional and Continental Strategies

- Actively engage in regional mechanisms like GFCM, ICCAT, and WestMED, not only in consultation but in joint action plans.
- Align national policies with the Africa Blue Economy Strategy and Agenda 2063, embedding fisheries and aquaculture into Libya's broader development goals.
- Participate in regional surveillance missions, knowledge-sharing programs, and cross-border fisheries management efforts with Tunisia, Algeria, and Egypt

h) Develop and Implement a National Plan for EU Sanitary Accreditation for Fishery Exports

To enable Libya to access high-value EU markets by meeting the sanitary and phytosanitary (SPS) standards required under EU Regulation (EC) No. 854/2004 and its successors (now under

Regulation (EU) 2017/625), and become officially listed as a country authorized to export fishery products to the European Union. Key Steps:

- Invest in the development or accreditation of a national reference laboratory capable of performing microbiological and chemical tests as per ISO/IEC 17025 standards. Collaborate with regional/international labs as needed.
- Require that all fish processing establishments and vessels implement traceability systems and Hazard Analysis and Critical Control Points (HACCP)-based food safety plans.
- Launch capacity-building programs for inspectors, processors, and exporters on hygiene, EU standards, documentation procedures, and certification systems.
- Initiate communication with the European Commission's Directorate-General for Health and Food Safety to request a pre-assessment or audit mission.
- Implement Pilot Certification Program.

In Summary, Libya has a unique opportunity to reimagine its fisheries and aquaculture sector as a pillar of sustainable economic growth, coastal resilience, and food sovereignty. Modernizing legal instruments, institutionalizing participatory governance, and embedding science-based, climate-resilient, and market-responsive policies are imperative. Through strategic alignment with the PFRS, and by embracing inclusive and evidence-driven approaches, Libya can unlock the full value of its marine wealth while preserving ecological integrity and ensuring equitable access for future generations.

Chapter 4: Libya's fisheries and aquaculture regulatory environment and alignment with regional and international instruments

4.1. Introduction:

This report presents a comprehensive assessment of Libya's fisheries and aquaculture regulatory environment, with a specific focus on its alignment with regional and international policy instruments, most notably, the Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa. Libya's marine and aquatic resource sector represents a critical component of its coastal economy, with the potential to contribute meaningfully to food security, employment generation, and sustainable economic diversification. However, persistent challenges—such as outdated legislative frameworks, institutional fragmentation, insufficient infrastructure, and limited integration with international norms, have constrained the sector's development.

Across Africa, numerous countries have undertaken successful regulatory and institutional reforms that demonstrate the value of structured alignment with international best practices. These experiences offer Libya actionable models for accelerating its own sectoral reform agenda. By enhancing legal and policy coherence with global and continental frameworks, Libya can modernize its marine governance systems, attract investment, and promote long-term sustainability in the sector.

4.2. Purpose of the report

The objective of this report is to provide an analysis of Libya's current regulatory environment in fisheries and aquaculture, and to propose actionable pathways for alignment with regional and international instruments. Main international instruments were examined, their objectives, and the situation of Libya regarding ratification and domestication. The report also draws on comparative experiences from African countries that have demonstrated success in reforming their fisheries sectors.

4.3. Methodology

The analysis in this report is based on a multi-pronged methodological approach:

- **Document Review**: A review of key regional and international instruments relevant to fisheries and aquaculture governance, including the PFRS, the FAO Code of Conduct for Responsible Fisheries, and the Africa Blue Economy Strategy. Each instrument's objectives were evaluated against Libya's level of ratification, domestication, and implementation.
- **Validation workshop**: Validation workshop: Validation of the findings in a stakeholder workshop held in Tunis, from 18-21th June 2025, where facilitated discussions and shared experiences on the challenges of ratification, enforcement, and compliance.
- **Gap and Alignment Assessment**: Libya's national policies, laws, and institutions were assessed for consistency with the identified international frameworks. Areas of misalignment, underperformance, and potential opportunity were mapped to develop a clear set of policy intervention points.

4.4. General view of the main instruments on fisheries and aquaculture:

Libya's engagement with international legal instruments governing fisheries and aquaculture is essential for ensuring sustainable resource management, combating illegal practices, and harmonizing with global standards. This section outlines the main binding agreements, voluntary guidelines, and cross-sectoral conventions relevant to the sector, along with Libya's current level of participation and implementation.

4.4.1. Binding International Agreements:

- The United Nations Fish Stocks Agreement (UNFSA) of 1995, which implements the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) (1982) concerning the conservation and management of straddling fish stocks and highly migratory fish stocks.

  → ***Libya is a signatory to UNCLOS but has not ratified the UNFSA to date.***

- The FAO Agreement on Port State Measures (PSMA), adopted in 2009 to prevent, deter, and eliminate illegal, unreported, and unregulated (IUU) fishing.

  → *Libya has signed the PSMA but its implementation at the national level remains limited due to some challenges.:*

Institutional Challenges: *Libya faces fragmented institutional authority, with overlapping mandates among key agencies (e.g., Ministry of Marine Wealth, Coast Guard, Customs, Ports Authority, and Ministry of Environment) and no designated lead body or coordination mechanism for PSMA enforcement. The outdated legal frameworks lack explicit PSMA provisions, while weak interagency coordination and the absence of a national implementation strategy further hinder effective enforcement.*

Operational Challenges: *Libya has not designated official PSMA ports, and existing port facilities lack the infrastructure, trained personnel, and inspection protocols needed for compliance. Port authorities are not equipped with standard operating procedures or PSMA-specific training. Technological infrastructure is weak, with no integrated systems for vessel tracking (e.g., VMS) or digital reporting. Moreover, transshipment and informal landings occur without monitoring, allowing vessels to bypass official ports and evade inspection, severely undermining PSMA enforcement efforts.*

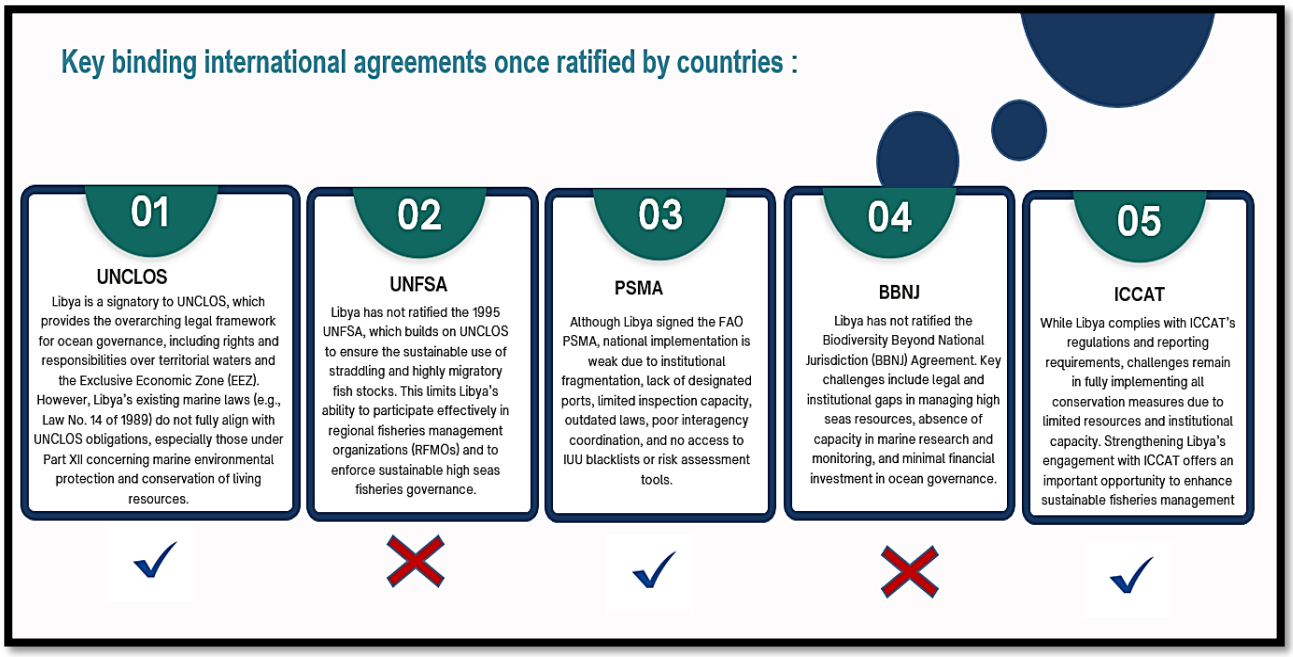
Technical Challenges: *Libya lacks targeted training programs for fisheries inspectors, customs officers, and port staff on PSMA procedures, IUU detection, and international inspection protocols. No risk assessment tools are in use to prioritize vessel inspections based on flag, history, or origin. Furthermore, Libya does not have regular access to or use of IUU vessel blacklists maintained by RFMOs such as ICCAT, nor is it actively connected to regional MCS intelligence-sharing platforms. These gaps significantly weaken Libya's ability to implement PSMA effectively.*

- The treaty on Biodiversity Beyond National Jurisdiction (BBNJ), focused on high seas governance, ocean protection, and sustainable use of marine resources in coordination with other international frameworks.

→ Libya is engaged in regional and international consultations on the ***BBNJ agreement*** *but has not yet ratified it.* There are several challenges includes:

Weak representation in global ocean governance forums, limiting Libya's ability to influence or integrate BBNJ provisions effectively. Absence of a clear national legal framework governing marine genetic resources (MGRs), area-based management tools (ABMTs), or environmental impact assessments (EIAs) in areas beyond national jurisdiction.

Existing fisheries and marine environment laws (e.g., Law No. 14 of 1989, Law 15 2003) do not cover high seas governance or align with UNCLOS Part XII obligations. Technical and scientific

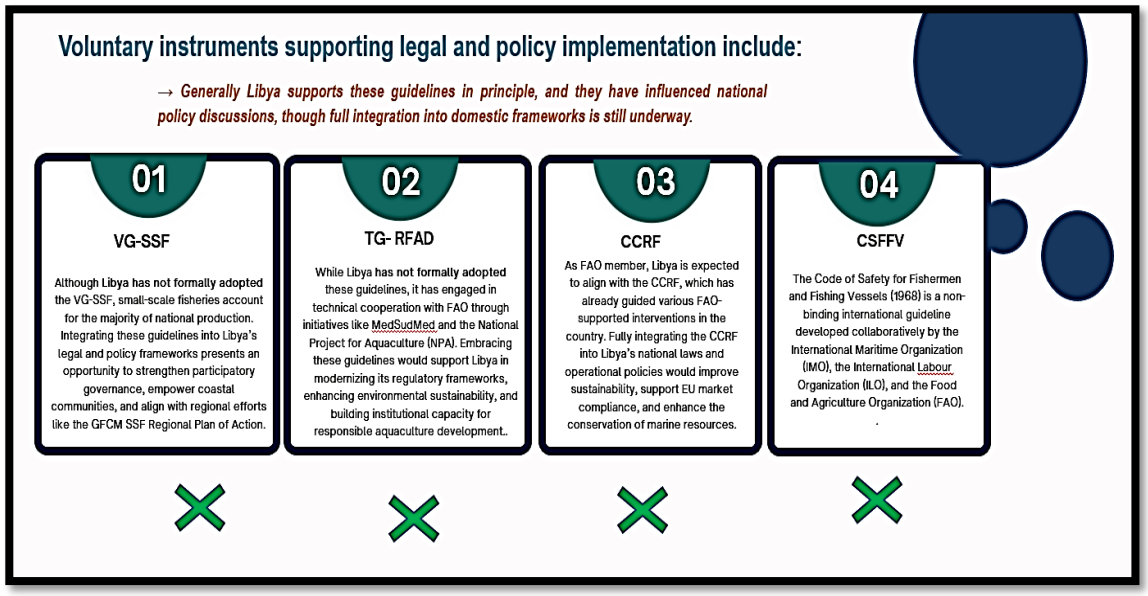


Capacity gaps such as lack of expertise in marine genetic resources and biodiversity mapping, particularly for high seas ecosystems. Limited data collection and monitoring systems for biodiversity conservation or environmental impact assessments in offshore areas. Absence of national research vessels or programs capable of supporting ocean science in areas beyond national jurisdiction. Operational and financial constraints include low investment in marine scientific research and capacity development. limited financial resources to support participation in negotiations, compliance monitoring, or implementation of BBNJ mechanisms. lack of a dedicated national budget line for ocean governance.

4.4.2. Voluntary instruments supporting legal and policy implementation include:

- The FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (VG-SSF).
- The FAO Technical Guidelines for Responsible Fisheries and Aquaculture Development.
- The FAO Code of Conduct for Responsible Fisheries.

→ Libya supports these guidelines in principle, and they have influenced national policy discussions, though full integration into domestic frameworks is still underway.



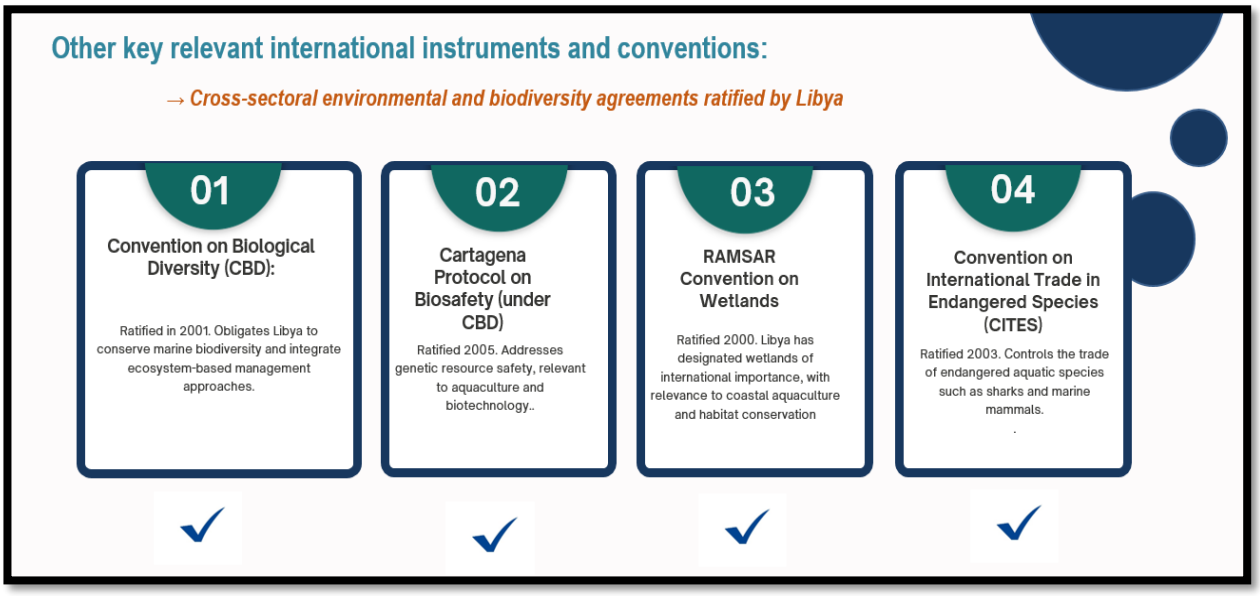
4.4.3. Other relevant international instruments and conventions:

These address cross-cutting aspects of fisheries and aquaculture, including trade, health, safety, and the environment:

→ Libya is a party to many of these conventions, but practical implementation varies across sectors due to governance and institutional constraints.

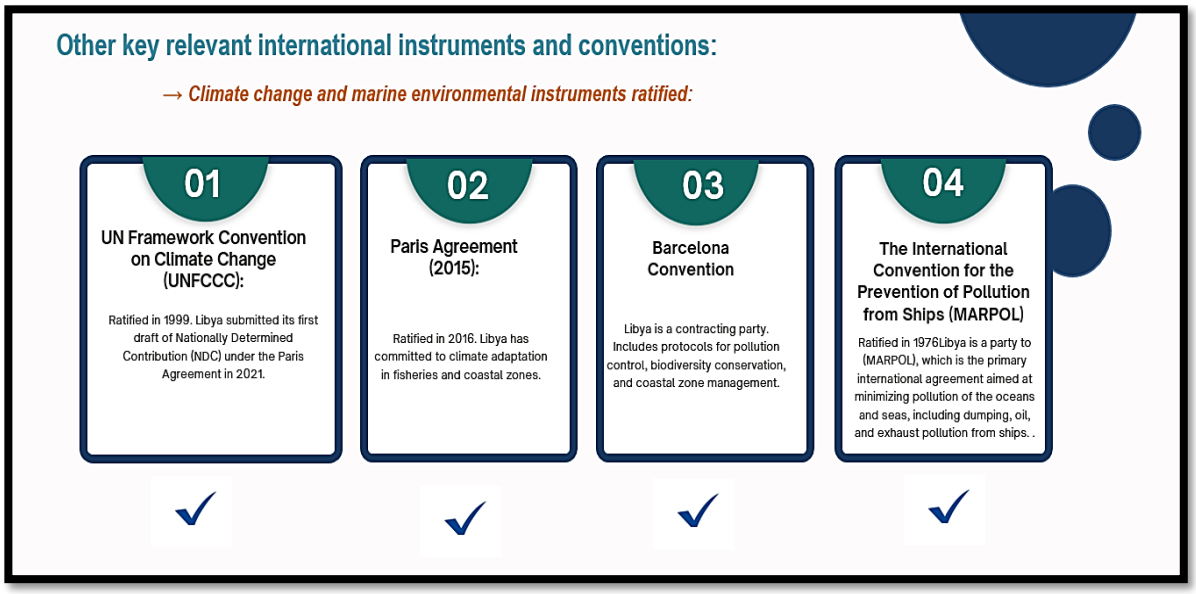
a- Cross-sectoral environmental and biodiversity agreements ratified by Libya:

- **Convention on Biological Diversity (CBD)**: Ratified in 2001. Obligates Libya to conserve marine biodiversity and integrate ecosystem-based management approaches.
- **Cartagena Protocol on Biosafety (under CBD)**: Ratified 2005. Addresses genetic resource safety, relevant to aquaculture and biotechnology.
- **RAMSAR Convention on Wetlands**: Ratified 2000. Libya has designated wetlands of international importance, with relevance to coastal aquaculture and habitat conservation.
- **Convention on International Trade in Endangered Species (CITES)**: Ratified 2003. Controls the trade of endangered aquatic species such as sharks and marine mammals.



b. Climate change and marine environmental instruments ratified:

- **UN Framework Convention on Climate Change (UNFCCC)**: Ratified in 1999. Libya submitted its **first draft of Nationally Determined Contribution (NDC)** under the Paris Agreement in 2021.
- **Paris Agreement (2015)**: Ratified in 2016. Libya has committed to climate adaptation in fisheries and coastal zones.
- **Barcelona Convention** (for the Protection of the Mediterranean Sea): Libya is a contracting party. Includes protocols for pollution control, biodiversity conservation, and coastal zone management.
- **The International Convention for the Prevention of Pollution from Ships (MARPOL):** Libya is a party to (MARPOL), which is the primary international agreement aimed at minimizing pollution of the oceans and seas, including dumping, oil, and exhaust pollution from ships. According to the International Maritime Organization (IMO), Libya acceded to MARPOL on 22 November 1976, and the convention entered into force for Libya on 22 December 1976.



c. Labor, safety, and trade-related instruments relevant but variably implemented:

- **Some ILO Conventions:** Libya has not ratified key (ILO) conventions specifically related to safety and work at sea, however, it has ratified other ILO conventions (29 Conventions). However, the following maritime and fisheries-related conventions and recommendations: have been proposed but remain unratified or pending formal submission by Libya:

<u>84th Session (October 1996):</u>

- C178 - Labor Inspection (Seafarers) Convention, 1996 (No. 178)
- C179 - Recruitment and Placement of Seafarers Convention, 1996 (No. 179)
- C180 - Seafarers' Hours of Work and the Manning of Ships Convention, 1996 (No. 180)
- P147 - Protocol of 1996 to the Merchant Shipping (Minimum Standards) Convention, 1976
- R185 - Labor Inspection (Seafarers) Recommendation, 1996 (No. 185)
- R186 - Recruitment and Placement of Seafarers Recommendation, 1996 (No. 186)
- R187 - Seafarers' Wages, Hours of Work and the Manning of Ships Recommendation, 1996 (No. 187)

<u>89th Session (June 2001)</u>

- C184 - Safety and Health in Agriculture Convention, 2001 (No. 184)
- R192 - Safety and Health in Agriculture Recommendation, 2001 (No. 192)

<u>94th Session (February 2006)</u>

- MLC, 2006 - Maritime Labor Convention, 2006 (MLC, 2006)

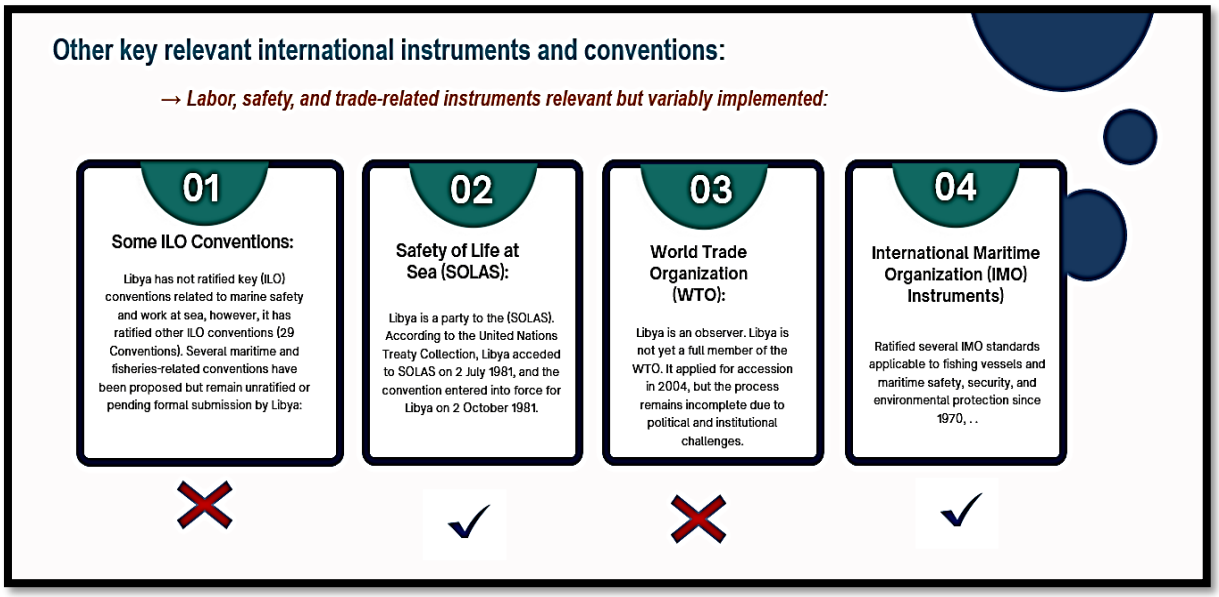
<u>96th Session (May - June 2007)</u>

- C188 - Work in Fishing Convention, 2007 (No. 188)
- R199 - Work in Fishing Recommendation, 2007 (No. 199)

111st Session (June 2023)

- C191 - Safe and Healthy Working Environment (Consequential Amendments) Convention, 2023 (No. 191)
- R207 - Safe and Healthy Working Environment (Consequential Amendments) Recommendation, 2023 (No. 207)
- R208 - Quality Apprenticeships Recommendation, 2023 (No. 208)

- **The International Convention for the Safety of Life at Sea (SOLAS):** Libya is a party to the (SOLAS). According to the United Nations Treaty Collection, Libya acceded to SOLAS on 2 July 1981, and the convention entered into force for Libya on 2 October 1981.



- **World Trade Organization (WTO)**: Libya is not yet a full member of the WTO. It applied for accession in 2004, but the process remains incomplete due to political and institutional challenges. This has direct implications for its fisheries and aquaculture sector, particularly in relation to:

- Market access and trade agreements: WTO membership facilitates access to international markets under Most-Favored Nation (MFN) status. Without WTO membership, Libya lacks full participation in multilateral trade negotiations and dispute resolution mechanisms.

- ❖ Sanitary standards: WTO members must comply with international SPS agreements. Libya's limited alignment with these standards, especially for fishery exports (e.g., to the EU), hampers its competitiveness and ability to export freely.
- ❖ Harmonization of trade policies: WTO encourages alignment of national trade policies with global rules, including tariff transparency, non-discrimination, and fair subsidies. Libya's exclusion makes it harder to harmonize fisheries trade regulations and benefit from preferential trade schemes.
- ❖ Accreditation and certification challenges: WTO membership would support Libya in developing recognized fish safety, labeling, and traceability systems—key conditions for exporting to regulated markets like the EU.

- **International Maritime Organization (IMO) Instruments**: Ratified several IMO standards applicable to fishing vessels and maritime safety, security, and environmental protection since 1970, Below is an overview of Libya's participation in major IMO instruments:

Table (27) Libya's participation in major IMO instruments

Convention	Libya's Status	Notes
International Convention for the Safety of Life at Sea (SOLAS), 1974	Acceded on 2 July 1981	Establishes minimum safety standards in ship construction, equipment, and operation.
International Convention on Load Lines (LL), 1966	Acceded on 2 July 1981	Sets limits on the draft to which a ship may be loaded, ensuring vessel safety.
International Convention for the Prevention of Pollution from Ships (MARPOL), 1973/78	Acceded on 2 July 1981	Aims to prevent marine pollution by ships from operational or accidental causes.
International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW), 1978	Acceded on 2 July 1981	Sets qualification standards for masters, officers, and watch personnel on seagoing merchant ships.
International Convention on Tonnage Measurement of Ships (TONNAGE), 1969	Acceded on 2 July 1981	Provides a universal system for tonnage measurement of ships.
Convention on the International Regulations for Preventing Collisions at Sea (COLREG), 1972	Acceded on 2 July 1981	Establishes "rules of the road" or navigation rules to be followed by ships and other vessels at sea to prevent collisions.
International Convention on Maritime Search and Rescue (SAR), 1979	Acceded on 2 July 1981	Provides a framework for cooperation among search and rescue organizations.
International Convention on Civil Liability for Oil Pollution Damage (CLC), 1969	Not ratified	Establishes a regime for compensating victims of oil pollution damage resulting from maritime casualties involving oil-carrying ships.

International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM), 2004	Not ratified	Aims to prevent the spread of harmful aquatic organisms from one region to another by establishing standards and procedures for the management and control of ships' ballast water and sediments.
International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS), 2001	Not ratified	Prohibits the use of harmful organotin compounds in anti-fouling paints used on ships and establishes a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems.

Libya's partial alignment reflects its political and institutional context, but also signals potential areas of reform and capacity building to enhance the sustainable governance of marine and aquatic resources. The tables below show the summary of the International Instruments related to the development of Fisheries and Aquaculture as well as their ratification status and their interposition with national regulations and their state of implementation.

Table (28) International instruments ratified and/or integrated by Libya

No.	Instrument Name	Type	Libya's Status	Notes	Recommendation
1	**United Nations Convention on the Law of the Sea (UNCLOS, 1982)**	Binding	Ratified	Libya has signed the Convention; however, its current maritime laws (e.g., Law No. 14 of 1989) are **not fully aligned** with its obligations under UNCLOS, particularly Part XII on environmental protection and conservation of living resources.	Amend supporting national legislation to ensure full implementation of the convention.
2	**Port State Measures Agreement (PSMA, 2009)**	Binding	Ratified	Aims to combat IUU fishing through port inspections and denial of services to offending vessels. Libya has **signed** the agreement, but **national implementation remains limited** due to outdated laws, weak inspection capacity, and poor inter-agency coordination.	Strengthen enforcement capacity and update regulatory frameworks.
3	**International Convention for the Conservation of Atlantic Tunas (ICCAT)**	Binding	Ratified	Libya is a contracting party and actively participates in ICCAT activities.	Strengthen national engagement and implementation.
4	**Convention on Biological Diversity (CBD)**	Binding	Ratified	Framework for conservation and sustainable use of biodiversity, including marine ecosystems.	Developing a dedicated Marine and Coastal Biodiversity Strategy and Action Plan, aligned with the national Biodiversity Strategy and Action Plan (NBSAP) and the Kunming-Montreal Global Biodiversity Framework, to guide coordinated, science-based, and inclusive actions for the protection, restoration, and sustainable use of marine ecosystems.

5	**RAMSAR Convention on Wetlands**	Binding	Ratified	Recognizes key wetlands; Libya has designated several RAMSAR sites.	To fully leverage the convention's potential in advancing sustainable fisheries, aquaculture, and biodiversity conservation, the following actions are recommended: Strengthen the protection, sustainable management, and integration of RAMSAR-designated wetlands into national fisheries, aquaculture, and climate adaptation policies, especially within coastal and inland water systems.
6	**MARPOL (International Convention for the Prevention of Pollution from Ships)**	Binding	Ratified	Addresses marine pollution from ships, relevant to fisheries and aquaculture.	Establish and operationalize a national port reception facility system that complies with MARPOL Annexes, to ensure proper collection and treatment of ship-generated waste and reduce pollution risks to fisheries and aquaculture zones.
7	**Barcelona Convention (UNEP Regional Seas Programme)**	Binding	Ratified	Libya is a contracting party to this convention focused on protecting the Mediterranean Sea.	Fully integrate the Protocols of the Barcelona Convention, particularly the ICZM Protocol and the Protocol for the Protection of the Mediterranean Sea Against Pollution, into national coastal zone planning and fisheries development strategies.
8	**International Convention on the Safety of Life at Sea (SOLAS)**	Binding	Ratified	Important for ensuring safety at sea for fishers and aquaculture operators.	Adapt and enforce national safety regulations for small fishing vessels and aquaculture support boats in alignment with SOLAS standards, with mandatory training and equipment requirements.
9	**Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**	Binding	Ratified	Relevant for regulation of trade in threatened marine species (e.g., corals, sharks).	Update national fisheries and customs laws to fully reflect CITES provisions. Train fisheries officers, customs agents, and environmental inspectors on identification of CITES-listed marine species. Strengthen cooperation

					between the CITES Management Authority in Libya and relevant ministries.
11	**FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas**	Binding	Ratified	Libya is listed among ratifying or participating countries in the report.	Strengthen national systems for licensing, monitoring, and controlling Libyan-flagged fishing vessels operating in areas beyond national jurisdiction to ensure full compliance with international conservation and management measures.
12	**Code of Safety for Fishermen and Fishing Vessels (1968)**	Binding	Ratified	Promotes safe vessel design and working conditions.	Enhance awareness and training programs for fishermen and vessel operators on the safety standards outlined in the Code, ensuring practical implementation of safe vessel design and working conditions to reduce accidents and fatalities in the fishing sector.

Table (29) International instruments currently under ratification or national consultation in Libya

No.	Instrument Name	Type	Libya's Status	Notes	Recommendation
1	**UN Fish Stocks Agreement (UNFSA, 1995)**	Binding	In Progress	Libya **has not signed** the 1995 UNFSA, limiting its ability to participate effectively in regional fisheries management organizations and to enforce sustainable governance in high seas fisheries.	Libya should prioritize signing and ratifying the UN Fish Stocks Agreement to strengthen its legal basis for participating in regional fisheries management organizations (RFMOs), enabling more effective cooperation and enforcement of sustainable management practices for straddling and highly migratory fish stocks..
2	**WTO Agreement on Sanitary and Phytosanitary Measures (SPS)**	Trade	Observer / Partially Applied	Libya is a WTO observer; gradual adoption of SPS principles in national food and fish safety systems.	Libya should accelerate the development and strengthening of its national SPS regulatory framework and inspection capacities to fully comply with WTO SPS standards, particularly focusing on fish and seafood export sectors to improve market access and ensure food safety for international trade
3	**WTO Technical Barriers to Trade Agreement (TBT)**	Trade	Observer / Partially Applied	Libya is aligning national quality infrastructure and technical regulations with TBT standards.	Libya should continue harmonizing its national technical regulations, standards, and conformity assessment procedures with international TBT guidelines to facilitate trade, reduce unnecessary trade barriers, and improve the competitiveness of its fisheries and aquaculture products in global markets.

Table (30) International instruments not yet ratified or integrated in Libya

No.	Instrument Name	Type	Libya's Status	Notes	Recommendation
1	**FAO Code of Conduct for Responsible Fisheries (1995)**	Voluntary	Not Ratified	Serves as a global standard; Libya supports it in principle but has not formally adopted or applied it fully.	Adopting these guidelines would help Libya modernize its regulatory frameworks, enhance environmental sustainability, and build institutional capacities needed for the development of responsible aquaculture.
2	**Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (VG-SSF)**	Voluntary	Not Integrated	It aimed at improving governance and livelihoods of small-scale fisheries. Libya **has not officially adopted** the guidelines; though small-scale fisheries represent the majority of national production.	Integrate the VG-SSF into national legal and policy frameworks.
3	**International Plan of Action to Prevent, Deter and Eliminate IUU Fishing (IPOA-IUU)**	Voluntary	Not Integrated	Libya has shown interest but lacks formal commitment and implementation structure.	Libya should formally adopt the IPOA-IUU and develop a comprehensive national action plan that establishes clear legal frameworks, monitoring systems, and enforcement mechanisms to effectively prevent, deter, and eliminate illegal, unreported, and unregulated fishing activities.
4	**Voluntary Guidelines for Aquaculture Development (FAO)**	Voluntary	Not Integrated	Relevant for Libya's National Project of Aquaculture; no full integration yet.	Libya should fully integrate the FAO Voluntary Guidelines for Aquaculture Development into its National Project of Aquaculture by adopting best practices for sustainable, responsible aquaculture that promote environmental protection, social inclusion, and economic viability.
5	**BBNJ Agreement (Biodiversity Beyond National Jurisdiction)**	Binding (new)	Not Ratified	Libya is involved in consultations but has not signed the treaty. Challenges include institutional and legal gaps,	Libya should prioritize ratification of the BBNJ Agreement while strengthening institutional frameworks, marine research,

				weak marine research and monitoring capacity, and limited financial investment.	and monitoring capacities, and mobilizing financial resources to effectively participate in the conservation and sustainable use of marine biodiversity beyond national jurisdiction.
7	**Nagoya Protocol on Access and Benefit Sharing**	Protocol to CBD	Not Ratified	Supports fair access to genetic resources. Libya has not yet signed.	Libya should move towards signing and ratifying the Nagoya Protocol to establish fair and equitable access to genetic resources, ensuring that benefits arising from their use support national biodiversity conservation and sustainable development goals.
8	**Cartagena Protocol on Biosafety**	Protocol to CBD	Not Ratified	Focuses on biotech and marine environmental safety. No formal engagement from Libya.	Libya should consider signing and ratifying the Cartagena Protocol to enhance national capacity for the safe handling, transfer, and use of living modified organisms (LMOs), thereby protecting marine and terrestrial biodiversity and supporting sustainable biotechnology development.

4.5 Opportunities arising from the domestication of regional, international and global instruments:

Libya has ratified several important international instruments relevant to fisheries and aquaculture development. However, the full domestication, implementation, and enforcement of these instruments remains a work in progress. Strengthening this process would allow Libya to unlock a wide range of strategic, economic, and institutional opportunities, including:

a. **Enhanced access to international support mechanisms**:

- Full domestication would position Libya to benefit from technical and financial assistance, capacity-building programs, and policy guidance provided through the African Union, FAO, GFCM, and regional fisheries bodies.
- Participation in multilateral monitoring and evaluation frameworks would improve governance, transparency, and international visibility of the sector.

b. **Stronger sovereignty and compliance in trade and certification**:

- Integrating international standards (e.g., EU IUU regulations, Codex Alimentarius, or , WTO-SPS/TBT) would enhance Libya's capacity to certify fish and aquaculture products, ensuring they meet international food safety, traceability, and legality standards.
- This would open doors for Libyan seafood exports, particularly to the EU and regional markets, while also protecting national waters from IUU fishing activities.

c. **Improved position in international trade negotiations**:

- Domestication of instruments such as the WTO SPS and TBT agreements would allow Libya to negotiate from a stronger position, ensuring that its fishery products are competitive in quality, safety, and pricing.
- It would also enable Libya to participate more effectively in regional trade blocs, benefit from preferential trade agreements, and attract foreign investment in the fisheries and aquaculture sector.

d. **Strengthened legal and institutional frameworks**:

- Aligning national legislation with global instruments supports the modernization of Libya's fisheries laws and governance mechanisms, improves enforcement capacity, and fosters a sustainable and inclusive blue economy.
- It would also support better integration of small-scale fishers, promote gender inclusion, and enhance environmental protections.

e. **Regional cooperation and integration:**

- Domestication would boost Libya's role in regional initiatives such as the WestMED Initiative, Barcelona Convention, and General Fisheries Commission for the Mediterranean (GFCM), reinforcing Libya's leadership and cooperation in regional fisheries governance and marine conservation.

4.6. Conclusion:

Libya's current fisheries and aquaculture regulatory environment demonstrates a foundational commitment to international cooperation and sectoral development, as evidenced by its ratification of key international agreements such as UNCLOS, CBD, PSMA, MARPOL, and the Barcelona Convention. However, the country remains only partially aligned with the broader spectrum of regional and global frameworks, notably those outlined in the African Union's Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS). Table ( ) summaries the status of Libya's alignment with key international instruments on fisheries and aquaculture.

Table (31) The integration of some global instruments into national policies that are directly or indirectly related to the fisheries and aquaculture sector

Instrument	Type	Libya's Status	Level of Integration	Notes
United Nations Convention on the Law of the Sea (UNCLOS, 1982)	Binding	Ratified	Moderate	Foundation for maritime rights; legislation lacks alignment with high seas governance (BBNJ, UNFSA).
UN Fish Stocks Agreement (UNFSA, 1995)	Binding	Not ratified	Low	Participates in discussions; no formal legal adoption.
Port State Measures Agreement (PSMA, 2009)	Binding	Ratified	Low	Limited implementation due to institutional fragmentation and weak enforcement mechanisms.
Biodiversity Beyond National Jurisdiction Agreement (BBNJ)	Binding (new)	Not ratified	None	Libya is engaged in consultations; lacks legal and scientific capacity.

FAO Code of Conduct for Responsible Fisheries (CCRF, 1995)	Voluntary	Not formally adopted	Partial	Cited in discussions, not fully integrated into legal or policy framework.
Voluntary Guidelines for Sustainable Small-Scale Fisheries (VG-SSF)	Voluntary	Not integrated	Low	Supported in principle; lacks policy integration and participatory mechanisms.
International Plan of Action on IUU Fishing (IPOA-IUU)	Voluntary	Not integrated	Low	No National Plan of Action; weak MCS and inspection systems.
FAO Guidelines on Aquaculture Development	Voluntary	Not integrated	Low	No clear integration into national aquaculture policies.
Barcelona Convention and Protocols (UNEP/MAP)	Binding	Ratified	Moderate to High	Well aligned in environment-focused policies; needs better enforcement.
MARPOL (Pollution from Ships)	Binding	Ratified	Moderate	Applied in maritime sectors; fisheries sector enforcement limited.
RAMSAR Convention on Wetlands	Binding	Ratified	Moderate	Sites designated; relevance to aquaculture acknowledged.
Convention on Biological Diversity (CBD)	Binding	Ratified	Moderate to High	Integrated in biodiversity and environmental strategies.
Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES	Binding	Ratified	Moderate	Applied to marine species; enforcement gaps exist.
ILO Work in Fishing Convention (C188), MLC, others	Binding	Not ratified	None	Maritime labor rights not yet aligned with international standards.
FAO Technical Guidelines for Aquaculture Certification	Voluntary	Not integrated	None	Certification lacking; important for exports and trade credibility.
World Trade Organization (WTO) - SPS/TBT Agreements	Binding (Trade)	Observer status	Partial	Efforts underway, but Libya is not yet a full member. Limits trade access.
ICCAT (Atlantic Tunas)	Binding	Ratified	High	Libya is an active participant; cooperation with RFMOs in place.
FAO Agreement to Promote Compliance on the High Seas	Binding	Ratified	Moderate	Relevance to IUU; enforcement mechanisms underdeveloped.
SOLAS, STCW, COLREG (IMO Maritime Conventions)	Binding	Ratified	High (for general maritime)	Maritime safety conventions ratified; implementation in fisheries vessels uncertain.

The domestication and implementation of ratified instruments are significantly limited by outdated legislation, institutional fragmentation, and capacity constraints. Moreover, many relevant conventions and protocols remain either unratified or only partially integrated, such as the UN Fish Stocks Agreement (UNFSA), BBNJ Treaty, Nagoya Protocol, and key ILO maritime labor conventions, limiting Libya's ability to fully benefit from international support, trade opportunities, and sustainability protocols.

Libya's path forward must focus on legal modernization, institutional coordination, and cross-sector integration, especially in relation to climate adaptation, blue economy development, and labor rights in the fisheries sector.

4.6. Recommendations for the harmonization of national instruments with relevant regional, continental and global instruments

In light of the analysis conducted by the **Centre of Excellence for Coastal Resilience (ACECoR)** and the findings of AU-IBAR's continental mapping of priority international instruments, the following recommendations are proposed to strengthen the alignment of Libya's national legal, policy, and institutional frameworks with relevant international, regional, and continental instruments in fisheries and aquaculture:

4.5.1. Roles of the state and national state actors:

a. **Regulatory and operational frameworks**
   Initiate a comprehensive review of national regulatory and operational frameworks to align them with:
   - WTO Trade Agreements (SPS and TBT),
   - EU IUU Regulation (2010),
   - The Biodiversity Beyond National Jurisdiction (BBNJ) Agreement,
   - FAO's Voluntary Guidelines (VG-SSF, Aquaculture Development, and IUU Prevention),
   - The United Nations Fish Stocks Agreement (UNFSA),
   - The Port State Measures Agreement (PSMA).

b. **Accelerate ratification processes**
   Accelerate the ratification of pending global instruments, including:
   - The BBNJ Treaty,
   - The Nagoya and Cartagena Protocols,
   - Additional ILO instruments focused on labor rights in the fisheries sector.

c. **Implement already ratified instruments**
   Strengthen implementation and enforcement of key ratified instruments such as:
   - UNCLOS (1982),
   - PSMA (2009),
   - MARPOL,
   - ICCAT Convention,
   - Convention on Biological Diversity (CBD),
   - RAMSAR and Barcelona Conventions,
   - The FAO Code of Conduct for Responsible Fisheries (where informally applied).

d. **Establish an inter-ministerial coordination mechanism**

Establish a national coordination framework involving relevant ministries (e.g., Marine Resources, Economy, Environment, Agriculture and Planning) to monitor and support the domestication and implementation of international instruments.

e. **Enhance inter-ministerial communication and advocacy**

Promote joint communication strategies among line ministries to engage high-level government leadership and Parliament to facilitate ratification processes and policy adoption. The Ministry of Marine Wealth, Ministry of Environment, Ministry of Transport, and other relevant institutions are recommended to develop an integrated action plan to:

- Prioritize international agreements for ratification.
- Coordinate national positions through joint technical teams.
- Utilize national and international experts in treaty alignment.

Note that: several conventions have overlapping objectives, necessitating efficient coordination mechanisms to avoid duplication and ensure policy coherence.

f. **Promote knowledge sharing and public awareness**

Develop a national awareness campaign led by the Ministry of Environment (and supported by Marine Resources and Foreign Affairs) to explain the importance of global instruments like BBNJ, and encourage public understanding and support.

g. **Establish a monitoring, evaluation, and data collection system**

Create a national monitoring and evaluation system with a focus on:

- The status of international commitments,
- Professionalization of fisheries and aquaculture activities,
- Traceability systems, fishery effort, and compliance indicators.

h. **Demonstrate political will and ensure financial commitment**

Demonstrate political will by:

- Allocating dedicated national budgets to support the domestication and application of global instruments.
- Engaging Parliament, judiciary, and local governance bodies (governors, mayors, municipal councils) to take an active role in legal reform, institutional support, and accountability at all levels.

4.6.2. Role of non-state actors

a. **Integrate NGOs and academia into national coordination platforms**

Integrate active Libyan marine NGOs (e.g., *Libyan Marine Science Association*, *Bessida*, *Marine Biology Society*) and universities into platforms such as:

- The Libyan Maritime Cluster,
- The WestMED National Hub stakeholder group, and
- Any emerging Blue Economy or Green Economy platforms.

b. **Support multi-sectoral dialogue and awareness campaigns**

Non-state actors should lead or co-organize public dialogues, workshops, and awareness campaigns on the relevance of instruments such as the VG-SSF, FAO Code of Conduct, and environmental treaties. Help communicate how these instruments can improve livelihoods, food security, biodiversity protection, and access to markets.

c. **Provide technical and policy input**

NGOs and experts should contribute to policy drafting, legal reviews, and monitoring tools related to the domestication of global instruments. They can also help translate technical instruments into simplified, accessible materials for fishers and coastal communities.

d. **Mobilize resources and international partnerships**

Collaborate with international donors, regional organizations, and UN bodies (e.g., FAO, UNEP, AU-IBAR) to secure technical assistance and project funding aimed at strengthening Libya's institutional and community-level capacity.

e. **Enhance local-level engagement and decentralized action**

Facilitate the **empowerment of coastal communities**, women, and youth by helping them participate in decision-making, training, and pilot projects linked to the instruments (e.g., IUU monitoring, aquaculture development, marine protected areas).

Chapter 5: Assessment of the alignment of national fisheries and aquaculture strategies and the national agricultural investment plans to the policy framework and reform strategy for fisheries and aquaculture in Africa and climate change adaptation

5.1. Introduction:

This chapter critically examines the extent to which Libya's national fisheries and aquaculture strategies, as well as its agricultural investment frameworks, align with the African Union's Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) and the continent's broader climate adaptation objectives. Given Libya's increasing vulnerability to climate change, exacerbated by water scarcity, sea-level rise, and coastal degradation, there is a growing need for strategic policy coherence and integrated planning. The chapter draws upon a comprehensive review of key national documents, stakeholder consultations, and international frameworks to identify institutional gaps, vulnerabilities, and potential reforms necessary to build a climate-resilient blue economy in Libya. It emphasizes the importance of inter-sectoral coordination, data-driven planning, and investment in climate-smart technologies for sustainable fisheries and aquaculture development.

5.2. Methodology:

The methodology applied in this assessment was guided by the Terms of Reference[1] and designed to evaluate Libya's national fisheries and aquaculture strategies, policies, and plans for alignment with the African Union Inter-African Bureau for Animal Resources (AU-IBAR) Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS). The aim was to identify gaps, opportunities, to strengthen the integration of climate change adaptation and resilience in Libya's fisheries and aquaculture sectors. The assessment was conducted through a combination of document review, stakeholder consultations, and analytical tools, as outlined below:

5.2.1. Document review

[1] Alignment of NAIPs and RAIPs to climate Change and environmental management - Guidelines for Assignment.

A wide range of national documents and strategic plans were collected and reviewed to assess their level of alignment with the AU-IBAR PFRS and relevance to climate change integration. The documents analyzed included:

- The 2023-2026 plan of the National Project for Aquaculture (2022)
- Strategic plan, general Aouthority of Marine Wealth Libya (2017–2022)
- Libya's Draft National Climate Change Strategy (2023)
- National Biodiversity Strategy and Action Plan (NBSAP)
- National Environmental Framework Law 15.
- Marine Wealth Exploitation Law No 14.
- FAO Country Programming Framework for Libya (2018–2022)
- AU-IBAR/ ACECoR 2023 Report on Alignment of Priority Instruments.
-

This step enabled the identification of existing policy gaps, climate vulnerabilities, and opportunities for integrating climate resilience into national fisheries and aquaculture governance.

5.2.2. **Stakeholder consultations:**

Key stakeholders were engaged to assess institutional and operational alignment with continental and global frameworks. These included representatives from 1) The Ministry of Marine Resources, 2) The Ministry of Agriculture and Livestock, 3) The Ministry of Environment. Key stakeholders, including government ministries, fisheries and aquaculture representatives, NGOs, academia and experts were invited to participate in the validation workshop to confirm findings and finalize recommendations. This consultation identified challenges and opportunities for enhancing climate change resilience in the sectors.

5.2.3. SWOT analysis:

A structured **(SWOT)** analysis was conducted using findings from both the document review and stakeholder consultations. This helped to systematically evaluate Libya's readiness to integrate climate adaptation in the fisheries and aquaculture sectors and to prioritize areas requiring strategic reform.

5.3. Climate change risks and impacts on Libya's fisheries and aquaculture:

Libya's vulnerability is exacerbated by its semi-arid to arid climate, which affects freshwater availability; A WFP-led livelihoods and resilience assessment conducted in 2021–2022 found that

7 out of 19 livelihood zones in Libya lack resilience to climate change and require targeted adaptation support (WEP, 2022) [1]. Given these challenges, strengthening climate resilience and food system sustainability is critical. There is an urgent need to enhance domestic agricultural production, improve water use efficiency, and support smallholder farmers, particularly in vulnerable areas, with climate-smart practices and technologies to ensure food security and sustainable livelihoods in the face of growing climate threats.

With its extensive Mediterranean coastline of approximately 1,900 km, Libya should highly depend on marine resources for food security, livelihoods, and economic diversification. However, the growth of fisheries and aquaculture sectors remains low. Also those sectors are increasingly vulnerable to the growing impacts of climate change. These impacts, including the rising sea surface temperatures, pose serious risks to marine biodiversity, fish stock productivity, marine ecosystems and fish distribution patterns and the long-term viability of aquaculture investments, particularly given the country's limited institutional capacity, weak monitoring systems, and moreover, the country lacks a comprehensive climate change adaptation strategy specific to the fisheries and aquaculture sector, although relevant elements are embedded in its draft National Climate Change Strategy and in environmental frameworks like the National Biodiversity Strategy and Action Plan (NBSAP).

5.3.1. Libya's climate change adaptation plan: assessment of described risks, vulnerabilities, and mitigation measures

Libya faces growing climate-related challenges, including rising temperatures, increasing frequency of extreme weather events, reduced rainfall, and sea level rise, all of which pose serious threats to water resources, agriculture, and coastal populations. While efforts such as adopting renewable energy and improving energy efficiency are underway, these are significantly constrained by the absence of a comprehensive regulatory framework.

Although Libya signed the United Nations Framework Convention on Climate Change (UNFCCC) in 2015 and ratified the Paris Agreement in 2021, under the Paris Agreement, Libya submitted its first Nationally Determined Contribution (NDC) in 2021. The NDC outlines Libya's commitment to reducing greenhouse gas emissions and adapting to the impacts of climate change. However, as of 2024, Libya has not submitted an updated NDC, and it has yet to submit its formal National Adaptation Plan (NAP). To address these gaps, two major initiatives have been launched: the SECCAR (Sustainable Energy and Climate Change in the Arab Region) project, commissioned

[1] World Food Programme (2022). Draft Libya country strategic plan (2023–2025). Via Cesare Giulio Viola, 68/70, 00148 Rome, Italy

by the German Federal Ministry for Economic Cooperation and Development (BMZ), and the CASEP (Climate Action in the Southern and Eastern Mediterranean) project, co-financed by the EU and BMZ. SECCAR focuses on strengthening national capacities in sustainable energy and climate adaptation, including the preparation of six key regulatory documents. CASEP complements this by supporting Libya in tackling water scarcity and other climate threats, while also guiding the development of a comprehensive national adaptation plan as part of a broader climate policy framework.

In 2021, Libya established the National Climate Change Committee (NCCC) under the General Authority for the Environment, signaling its growing institutional commitment to addressing climate risks. The NCCC serves as the national coordinating body for climate change policy, tasked with overseeing the development of Libya's National Adaptation Plan (NAP) and updating its Nationally Determined Contributions (NDCs) under the Paris Agreement. This committee can provide a crucial institutional platform for integrating fisheries and aquaculture into national climate strategies if coordination is considered, particularly given the sectors' vulnerability to rising sea temperatures, acidification, and coastal erosion. By engaging the NCCC in future revisions of the NAIP and environmental policies, Libya can ensure that blue economy components, especially aquaculture and marine resource protection, are systematically embedded into climate adaptation and food security frameworks.

As of 2024, Libya has not yet finalized or submitted an official National Adaptation Plan (NAP)[1] to the UNFCCC. However, a draft National Climate Change Strategy (2023) exists and outlines broad climate vulnerabilities, adaptation needs, and sectoral risks. This response is based on a review of that draft and related national reports.

Table (32) Overall risks for Libya:

Category	Status in National Climate Strategy	Level of Risk	Proposed Mitigation Measures
Climate Vulnerabilities	Identifies temperature rise, drought, water scarcity, extreme weather- high carbon emission	High	Integrated water resource management, solar energy, early warning systems
Anticipated Risks	Decreased rainfall, increased evapotranspiration, desertification, heatwaves. disrupt the Earth's natural climate balance	High	Green infrastructure, afforestation, smart agriculture, and community resilience

[1] As indicated in point 1, there is currently no formal National Climate Change Adaptation Plan. Nonetheless, significant efforts addressing climate change have been undertaken, albeit in a fragmented and uncoordinated manner. While some of these activities have not been systematically documented, their tangible outcomes are observable on the ground. Accordingly, the information presented in the table is not derived from an official plan but rather compiled from various initiatives implemented by multiple national agencies and non-governmental organizations.

Overall Gaps	No NDC submitted; no national climate change law; no formal NAP	Critical gap	Urgent need to finalize NDCs, NAP, and national legal climate framework

Table (33) Aquatic ecosystems:

Category	Status in Strategy/NBSAP	Level of Risk	Proposed Mitigation Measures
Climate Vulnerabilities	Rising sea surface temperatures, coastal erosion, saltwater intrusion	High	Marine spatial planning, coastal buffer zones, pollution control
Anticipated Risks	Loss of marine biodiversity, damage to seagrass beds, acidification risks	High	Habitat protection, creation of marine protected areas (MPAs)
Overall Gaps	No monitoring program for marine climate impacts; limited ecosystem data	Critical	Establish monitoring systems, data-driven habitat mapping

Table (34) Fisheries and aquaculture

Category	Status in Strategy/Projects	Level of Risk	Proposed Mitigation Measures
Climate Vulnerabilities	Sea warming, changes in fish migration, inland water scarcity	High	Promotion of climate-smart aquaculture (e.g., temperature-tolerant species)
Anticipated Risks	Reduced productivity of key species, aquaculture stress, gear losses	High	Upgraded infrastructure, offshore cages, early warning systems
Overall Gaps	No fisheries-specific climate adaptation plan; weak institutional capacity	High	Integrate fisheries into NDCs, NAIP, and climate finance frameworks

5.3.2. Climate change risks and impacts on Libya's fisheries and aquaculture sector:

It is obvious Libya currently lacks an official NAP, though the draft strategy provides a foundation for climate adaptation planning. Aquatic ecosystems, fisheries, and aquaculture are recognized as vulnerable, but not yet addressed with sector-specific adaptation frameworks. High levels of risk are identified across all categories due to environmental sensitivity and weak institutional capacity. Proposed measures exist in principle but need to be operationalized through integrated planning, legal reform, and investment mobilization. Below is an overview of the key climate change risks and impacts affecting Libya's fisheries and aquaculture sector:

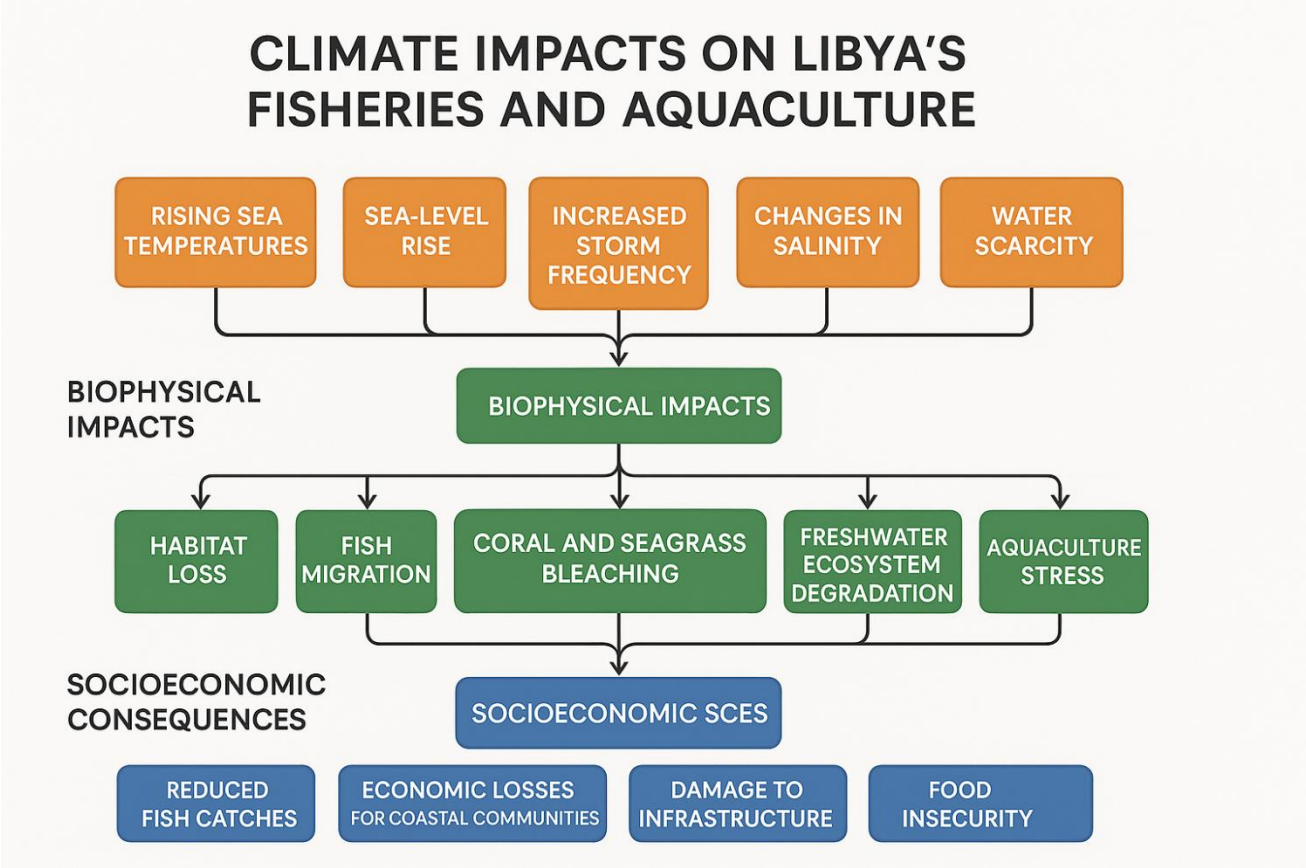
Table (35) overview of the key climate change risks and impacts affecting Libya's fisheries and aquaculture sector

Drivers	Biophysical Impacts	Implications for Fisheries and Aquaculture	Proposed Adaptation Measures
Changes surface water temperature	- Changes in species distribution (northward migration)- Coral bleaching and seagrass loss- Altered spawning periods and reproductive cycles. potential for reduced dissolved oxygen levels, leading to "dead zones	- Decline in local fish stocks (sardines, groupers, mackerel)- Disruption to artisanal fishers' catch patterns- Economic losses for coastal communities, increase the risk of diseases	- Promote adaptive fisheries management- Conduct stock assessments regularly- Diversify target species and fishing grounds. maintaining and restoring wetlands, preserving coastal areas, utilizing "soft" shoreline maintenance, using extended detention wetlands for flood control and water quality benefits
Increased Salinity and Evaporation (inland areas)	- Reduced freshwater inflows- Loss of brackish water zones for aquaculture	- Stress on land-based aquaculture (especially tilapia, catfish)- Decrease in aquaculture water quality and fish survival rates	- Use of salt-tolerant aquaculture species- Integrate recirculating aquaculture systems (RAS)- Improve water reuse and treatment systems developing climate-resilient aquaculture technologies.
Rising sea level	- Inundation of low-lying fishing ports and hatcheries- Salinization of coastal aquifers	- Damage to infrastructure- Displacement of coastal communities- Decreased access to freshwater for hatcheries	- Establish coastal buffer zones- Relocate critical infrastructure- Enhance coastal monitoring and resilience planning; Protecting Coastlines/ Hard Engineering: Ecosystem-Based Adaptation-Early Warning Systems
Changes in precipitation and water availability	- Increased droughts inland- Runoff leading to sedimentation and pollution in coastal waters	- Impact on feed crop production (barley, soy) for aquaculture- Degraded nearshore ecosystems affecting wild fisheries	- Promote sustainable watershed management- Implement erosion control and reforestation- Support climate-smart agriculture to secure feed. Building flood barriers, diversifying water sources, implementing water-efficient technologies, and restoring wetlands.
Increase in frequency and/or intensity of storms	- Physical damage to aquaculture cages and boats- Habitat destruction (e.g., seagrass beds, rocky reefs)	- High operational costs and risk for aquaculture investors- Reduced nursery and breeding habitat for marine species	- Reinforce aquaculture systems- Develop early warning systems- Introduce insurance schemes for climate risks. strengthening coastal defenses, Introduce insurance schemes for climate risks

a. Specific impacts on Libya's fisheries sector:

- Artisanal fisheries, which dominate Libya's fishing effort, are particularly vulnerable due to their dependence on seasonal species and coastal habitats. Changes in water temperature and current patterns have already shifted the availability of certain fish stocks.
- Species such as sardines, cuttlefish, and red mullet, which form the bulk of domestic landings, are being affected by warming waters and declining productivity.
- The absence of advanced monitoring systems makes it difficult to assess climate-driven shifts in stock abundance, leading to increased uncertainty and risk for fishers.

Figure (9) conceptual frame work of climate impact on fisheries and aquaculture



b. Impacts on Libya's aquaculture sector:

- Inland freshwater aquaculture (primarily tilapia and catfish) faces serious water scarcity due to rising evaporation and prolonged droughts in the southern and interior regions.
- Marine cage aquaculture, being tested and developed along the eastern coastline, is vulnerable to storm surges and rising temperatures that increase fish stress and disease outbreaks.
- The lack of biosecurity measures, hatchery capacity, and climate-resilient infrastructure remains a major challenge for aquaculture expansion.

5.4. The national agricultural investment plan and strategic agricultural development policy in Libya:

Libya's National Agricultural Investment Plan (NAIP) and overarching strategic agricultural policies aim to address long-term food security, rural livelihoods, and environmental sustainability. While historically focused on terrestrial agriculture, these frameworks present a latent but significant opportunity to support fisheries and aquaculture development, particularly in the face of climate change, water stress, and food import dependency. The Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) encourages countries to embed fisheries and aquaculture within national agricultural strategies, promoting holistic resource governance, cross-sectoral coordination, and climate-adaptive investments. This integration is essential for countries like Libya, where blue economy development is increasingly seen as a lever for economic diversification and resilience.

Libya's agriculture, livestock, and fisheries sectors have traditionally played a secondary role in the national economy compared to oil which dominated the national economy. also economic instability, and institutional fragility has hindered Libya's progress towards achieving the Sustainable Development Goals (SDGs). As a result, the country has made only limited headway on key goals, particularly SDG 2 (zero hunger), SDG 6 (clean water and sanitation), SDG 8 (decent work and economic growth), SDG 12 (Responsible Consumption and Production).and SDG 15 (life on land). A critical barrier to effective SDG implementation and monitoring in Libya is the lack of comprehensive, reliable, and up-to-date data, particularly disaggregated information directly linked to SDG targets and indicators. This data gap makes it difficult to conduct accurate assessments of national progress or to design targeted interventions.

However, Libya's strategic agricultural policies emphasize enhancing productivity, improving water-use efficiency, and developing sustainable food systems. The NAIP includes investment goals in infrastructure, irrigation modernization, and youth employment in agriculture, which could

be expanded to include aquaculture zones, fish feed production, and post-harvest value chains. Given Libya's extreme water scarcity and reliance on groundwater, the policy emphasis on efficient water management is particularly relevant for the aquaculture sector. As documented by SECCAR and CASEP projects, Libya faces imminent depletion of its freshwater resources within the next two decades. Integrating water-saving technologies in aquaculture (e.g., recirculating aquaculture systems or integration with agriculture) aligns with the NAIP's stated sustainability objectives.

However, in recent years, especially since 2021, there has been renewed attention toward food security, economic diversification, and sustainable rural development by the national agricultural investment plans and Policies. Despite these synergies, there is currently limited explicit recognition of the fisheries and aquaculture sectors within Libya's NAIP and strategic agricultural planning. Unlike some African countries that have adopted joint agricultural and fisheries investment frameworks such as Zambia, Libya lacks a coordinated inter-sectoral planning model. This limits the mobilization of domestic and external investment in aquaculture and impedes integration into broader climate adaptation and food security agendas.

Additionally, there is minimal alignment between Libya's strategic agricultural planning and its commitments under the Paris Agreement, as the country has yet to submit its Nationally Determined Contributions (NDCs) or a National Adaptation Plan (NAP). The CASEP project, co-financed by the EU and BMZ, has taken steps to support the development of such a plan, but implementation remains nascent. Fisheries and aquaculture, which are highly vulnerable to climate impacts such as warming waters, coastal erosion, and salinization, are notably absent from current adaptation strategies. This omission represents a missed opportunity to align national policy with Policy Area 7 of the PFRS, which focuses on climate change adaptation and disaster risk management in fisheries and aquaculture. Furthermore, the lack of integration undermines efforts under Policy Area 1 (mainstreaming into national development) and Policy Area 4 (infrastructure and investment).

5.4.1. Key national frameworks and strategic programs:

Libya is not among the most active implementers of Comprehensive Africa Agriculture Development Programme CAADP, however, aligning its National Agricultural Investment Plan (NAIP) and fisheries/aquaculture strategies with CAADP and PFRS principles would help:

- Attract international and regional support.
- Improve cross-sectoral coordination.

- Promote climate-resilient and inclusive growth in the agriculture and blue economy sectors.

Although Libya does not yet have a finalized, consolidated (NAIP) aligned fully with the (CAADP) framework, several policy documents and strategic initiatives reflect the country's evolving agricultural priorities, including:

a) **The National Project for Aquaculture (2021–ongoing)**

Overseen by the Ministry of Marine Resources, it aims to increase domestic fish production, reduce import dependency, and support rural employment through hatchery development, fish farming, and feed production.

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b) **The Agricultural Development Strategy**

Focused on land productivity, food production, and sustainable rural development; aquaculture is included as a potential sector for investment.

c) **The National Biodiversity Strategy and Action Plan (NBSAP)**

Recognizes the importance of marine and coastal biodiversity and outlines **conservation measures that support sustainable fisheries** and protect aquatic habitats.

d) **Draft National Climate Change Strategy (2023)**

Emphasizes sustainable water use, climate-smart agriculture, and environmental protection. Fisheries and aquaculture are **indirectly referenced** as sensitive sectors requiring resilience planning.

e) **Libya Food Security Strategy (in development)**

Led by the Ministry of Planning and supported by FAO and UNDP, this strategy aims to boost local protein production, including from aquaculture.

5.4.2. Gaps in alignment of the National Agricultural Investment Plan with PFRS and CAADP investment guidelines:

Libya's National Agricultural Investment Plan (NAIP) and broader agricultural strategies have historically prioritized land-based production systems, particularly cereals, livestock, and irrigation infrastructure. While some environmental and water resource management initiatives offer indirect benefits to aquatic ecosystems, they fall short of addressing the unique challenges faced by marine and inland fisheries. The lack of a dedicated fisheries and aquaculture strategy, combined with fragmented institutional responsibilities, limits the sector's capacity to adapt to climate change, attract investment, and scale up sustainable production. Nevertheless, Libya's extensive Mediterranean coastline, growing reliance on food imports, and increasing water

scarcity highlight the significant potential of fisheries and aquaculture to contribute to economic diversification, climate resilience, and national food and nutrition security.

The Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa encourages the integration of these sectors into national agricultural strategies through holistic, cross-sectoral planning, climate-smart investment, and governance reforms. This alignment is especially crucial for Libya, where the blue economy is gaining attention in national discourse and international cooperation (e.g., through the WestMED Initiative, GFCM, and AU-IBAR). Despite these strategic opportunities, Libya's NAIP (2021–2025), as it currently stands, does not explicitly prioritize fisheries and aquaculture in its objectives, budgeting, or monitoring frameworks. The sector is occasionally referenced in a generic manner under food production and sustainable resource management. There is a significant lack of institutional integration, investment targeting, and policy coordination between agricultural authorities and fisheries institutions such as the Ministry of Marine Wealth and the National Project for Aquaculture (NPA).

Nonetheless, some emerging opportunities exist: 1) Investment priorities include value chain development and private sector engagement, which can be extended to fisheries and aquaculture. 2) Libya's collaboration with FAO, AU-IBAR, and GFCM provides platforms to incorporate aquaculture zones, disease management protocols, and traceability systems.

To fully align with the PFRS and continental goals under CAADP and the Africa Blue Economy Strategy, Libya must explicitly integrate fisheries and aquaculture into future revisions of its NAIP, supported by inter-ministerial coordination, regional cooperation, and climate adaptation strategies.

Table (36) Summary Assessment of Alignment of Libya's NAIP with PFRS

PFRS Policy Area	Level of Alignment	Key Observations
1. Conservation and Sustainable Resource Use	*Partial*	Some references to water management and sustainability, but no explicit strategies for fisheries or marine ecosystems. Environmental goals (e.g., biodiversity and water management) offer indirect support. No formal investment in MCS, responsible fishing, or habitat protection in aquatic systems.

		NAIP often address terrestrial and marine ecosystems in silos. This undermines the development of holistic, ecosystem-based resource management that integrates catchment-level planning, biodiversity conservation, and sustainable aquaculture.
2A. Small-Scale Fisheries Development	*Not Aligned*	The NAIP lacks specific objectives or investment priorities for small-scale fishers. No reference to cooperatives, artisanal fishing infrastructure, or targeted livelihood programs. This limits opportunities for food security and rural employment through coastal fisheries
3. Sustainable Aquaculture Management	*Partial*	Aquaculture is not explicitly included in NAIP priorities, although infrastructure and water-saving goals could benefit the sector. No clear investment plans for hatcheries, feed production, or RAS systems. Fragmented support hinders growth, but not in NAIP priorities; no designated aquaculture zones or infrastructure investments.
4. Responsible & Equitable Fish Trade	*Not Aligned*	No recognition of fisheries or aquaculture value chains. Trade and market development goals are directed at agriculture and livestock. Libya remains unaccredited for EU fish exports due to regulatory and quality gaps; fish trade frameworks are absent in NAIP and not aligned with COMESA/AU protocols.
5. Regional & Sub-Regional Cooperation	*Partial*	Libya participates in regional platforms (GFCM, WestMED, AOAD, COMESA), but NAIP lacks specific commitments to regional fisheries protocols or alignment with continental strategies like CAADP or PFRS.
6. Awareness & Human Capacity Development	*Not Aligned*	Fisheries training programs exist (e.g., through NPA), but there is no inclusion of sector-specific capacity building in NAIP education priorities.
7. High Seas Fisheries	*Not Aligned*	High seas access and governance are not addressed in NAIP. No reference to UNCLOS, PSMA, or cooperation with RFMOs, despite Libya's Mediterranean EEZ and membership in ICCAT.
8. Cross-Cutting Issues (Climate,	*Not Aligned*	Climate adaptation plans overlook fisheries/aquaculture; Current national investment frameworks and climate

Gender, Youth, Disaster Risk)		strategies do not include direct measures that address the specific climate change impacts on aquatic systems, such as rising sea surface temperatures, increased coastal erosion, salinization, shifting fish stocks and altered hydrological regimes are not reflected in national risk assessments. This gap limits the sector's capacity to adapt and respond effectively to environmental stressors. no gender/youth-specific blue economy initiatives linked to NAIP.

5.4.3 Opportunities for integrating fisheries and aquaculture into Libya's national agricultural investment plan (NAIP) and strategic agricultural policy:

Although Libya's National Agricultural Investment Plan (NAIP) and strategic agricultural policies have historically focused on terrestrial agriculture, they offer a promising opportunity to formally integrate fisheries and aquaculture into broader national planning frameworks. This integration is increasingly critical given Libya's vulnerability to climate change, water stress, economic fragility, and its heavy dependence on food imports.

Despite the importance of sustainable aquatic food systems, Libya's NAIP currently makes only marginal reference to fisheries and aquaculture. This omission constrains the country's ability to mobilize cross-sectoral investment, respond to climate threats, and build food system resilience. In contrast, the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS) explicitly advocates for embedding fisheries and aquaculture into agricultural investment and food security strategies through a holistic, climate-aware, and inclusive approach.

To address these gaps, Libya should consider a comprehensive reform agenda that reflects best practices from other African states, such as Zambia, where integrated agricultural and fisheries investment frameworks have been successfully adopted. Key opportunities for Libya include:

- Leveraging "Blue Economy Platforms": Platforms such as the Libyan Maritime Cluster and Libya's engagement in the WestMED Initiative can be used to advocate for the formal inclusion of fisheries and aquaculture in national development and investment planning. These platforms are already engaged in blue economy dialogue and can help promote marine aquaculture and coastal livelihoods as strategic priorities.
- Integrating fisheries into revised NAIP and National Development Plans NDP: Upcoming revisions of the NAIP and NDP provide a strategic window to incorporate aquaculture

zones, fish feed production units, and cold chain infrastructure into Libya's investment priorities. This would help align with Policy Area 4 of the PFRS, which emphasizes infrastructure and value chain development.

- Promoting water-smart aquaculture: Libya's acute water scarcity demands innovative solutions. Aquaculture development should be aligned with the NAIP's goals of improving water-use efficiency, such as through recirculating aquaculture systems (RAS) and aquaponics, especially in arid inland areas. These systems not only save water but can be integrated with agriculture, creating synergies in resource use and income diversification.
- Enhancing Public–Private Partnerships (PPPs): With the support of international and regional frameworks (GFCM, FAO, AOAD), Libya can promote PPPs in aquaculture, particularly targeting the coastal zones, where ecological suitability is highest. These investments can contribute to job creation for youth and women in post-conflict coastal regions.
- Aligning with CAADP and PFRS principles: Libya should use the Comprehensive Africa Agriculture Development Programme (CAADP) and the PFRS as guiding frameworks to ensure that investment strategies are climate-smart, inclusive, and gender-responsive. Integrating small-scale fishers, vulnerable groups, and youth in coastal areas will enhance policy coherence with SDG 1 (poverty reduction), SDG 2 (zero hunger) and SDG 13 (climate action).
- Strengthening Climate and SDG Integration: As of 2024, Libya has not submitted its NDC or National Adaptation Plan (NAP) under the Paris Agreement. Fisheries and aquaculture, which are highly sensitive to warming waters, salinization, and sea-level rise, remain absent from national climate strategies. Their integration into both the NAIP and Libya's future NAP would close a critical policy gap under Policy Area 7 of the PFRS.
- Improving Coordination and Data Systems: Institutional fragmentation continues to be a barrier to coordinated sector planning. There is a need to improve inter-ministerial coordination between the Ministry of Agriculture, Ministry of Marine Wealth, Ministry of Environment, and the Central Bank to ensure aligned investment flows. Moreover, the absence of disaggregated data limits effective monitoring and planning. Enhancing fisheries-related statistical systems and linking them to agricultural databases would support evidence-based decision-making as envisioned under Policy Area 6 of the PFRS.

5.5. SWOT analysis for the fisheries and aquaculture sector

A structured SWOT analysis was conducted using findings from both the document review and stakeholder consultations. This assessment helps to systematically evaluate Libya's readiness to integrate climate adaptation into its fisheries and aquaculture sectors and to identify areas requiring strategic reform and investment. It reflects perspectives shared by experts from national institutions, academic bodies, and development partners, alongside official policy documents and alignment reviews conducted within the framework of the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS).

Table (37) SWOT analysis for the fisheries and aquaculture sector

Strengths	Weaknesses
Extensive marine resources and coastline: Libya's 1,900 km Mediterranean coastline and ecologically rich marine zones present a strong foundation for wild capture fisheries and marine aquaculture. Deep waters along the eastern coast are well-suited for cage farming technologies. **Regulatory commitments and international engagement:** Libya is a signatory to several key international conventions including UNCLOS and the Port State Measures Agreement (PSMA), with active participation in regional platforms such as GFCM, WestMED, ICCAT, and AOAD. These provide entry points for alignment with global sustainability standards. **Institutional recognition of aquaculture:** The National Project for Aquaculture (NPA), launched in 2021, has issued operational licenses, forms, and regulatory guidelines. It serves as a foundational platform for	**Fragmented governance and overlapping mandates:** Ministries and agencies (Marine Wealth, Agriculture, Environment, Ports, and Coast Guard) share responsibilities without a clear coordination mechanism, undermining effective regulation and climate-adaptive planning. **Outdated legal framework:** Law No. 14 of 1989 and its executive regulations remain the primary legal instruments governing fisheries, lacking reference to PSMA, climate change, or participatory management. **Limited infrastructure and technical capacity:** The majority of Libya's 128 landing sites lack basic infrastructure such as cold storage, water testing labs, and modern fish markets. Aquaculture hatcheries and feed production facilities are largely non-functional or outdated.

structured aquaculture development and regulatory harmonization. **Growing political attention to the blue economy:** Consultations with government and non-state actors indicate growing interest in using fisheries and aquaculture as a tool for food security and economic diversification. Integration into blue economy discussions under the WestMED Initiative demonstrates political will.	**Institutional coordination challenges:** Insufficient coordination among governmental ministries (Agriculture, Marine Resources, Environment) and limited engagement with local stakeholders contribute to regulatory overlaps and delays in policy implementation **Weak data and monitoring systems:** The absence of reliable, up-to-date fisheries data, digital reporting systems, and marine spatial planning tools prevents informed policy decisions and limits climate risk assessments.
Opportunities	**Threats**
Integration into national agricultural and climate strategies: Libya's National Agricultural Investment Plan (NAIP), if expanded to include aquaculture and small-scale fisheries, could serve as a vehicle for climate-resilient investment. There is also an opportunity to embed fisheries into future NDCs and National Adaptation Plans (NAPs). **Adoption of resilient technologies and practices:** Innovations such as recirculating aquaculture systems (RAS), salt-tolerant species, ecosystem-based approaches, and improved post-harvest systems can support climate adaptation and reduce pressure on wild stocks. **Public-Private Partnerships and donor engagement:** Stakeholders have emphasized the potential	**Accelerating climate change impacts:** Coastal erosion, seawater intrusion, rising sea surface temperatures, and more frequent extreme weather events directly threaten the viability of fisheries and aquaculture, particularly for vulnerable communities. **Political and economic instability:** Institutional fragility, insecurity in parts of the country, and disruption of public funding streams continue to delay the implementation of strategies and limit private sector confidence. **Informal and unregulated activities:** Unmonitored landings, IUU fishing, and the absence of traceability systems reduce sustainability, hinder exports (e.g., to the EU), and jeopardize compliance with international agreements.

of PPPs to revitalize fishery ports, rehabilitate aquaculture farms, and pilot sustainable models in cooperation with FAO, GFCM, and the private sector. **Regional cooperation and knowledge sharing:** Participation in the GFCM 2030 strategy, AOAD training programs, and WestMED innovation dialogues can strengthen Libya's technical knowledge, standard alignment, and cross-border fisheries governance.	**Market and regulatory uncertainty:** The absence of clearly defined trade policies and targeted regulatory support for fisheries and aquaculture creates uncertainty in domestic and international markets. This is compounded by potential challenges in complying with evolving international standards. **Missed integration in national development agendas:** Fisheries and aquaculture are still absent or weakly referenced in key national strategies including the National Development Plan, climate change strategy drafts, and food security frameworks.

5.6. Conclusion

Libya possesses a unique opportunity to harness its extensive coastline and marine biodiversity for sustainable development through the fisheries and aquaculture sectors. However, current policy and investment frameworks remain heavily skewed toward terrestrial agriculture, with fisheries and aquaculture insufficiently integrated into climate adaptation strategies, agricultural planning, and national development priorities. Despite emerging initiatives, such as the National Aquaculture Project and the draft National Climate Change Strategy, systemic gaps persist in institutional capacity, data monitoring, inter-ministerial coordination, and targeted investment.

The absence of a finalized National Adaptation Plan (NAP), limited submission of NDCs under the Paris Agreement, and lack of a fully aligned National Agricultural Investment Plan (NAIP) restrict Libya's ability to respond effectively to climate threats. Artisanal fisheries, inland aquaculture, and coastal communities remain acutely exposed to rising temperatures, salinity shifts, and infrastructure vulnerabilities, without adequate support mechanisms in place. While pilot projects, regional partnerships (e.g., WestMED, GFCM), and stakeholder consultations offer

a foundation for reform, a transformative shift is required to align Libya's fisheries and aquaculture governance with the PFRS, the CAADP framework, and global climate commitments.

By capitalizing on opportunities for economic diversification, adopting resilient technologies, and improving institutional coordination, Libya can mitigate threats posed by climate change and political instability, ultimately paving the way for a sustainable and competitive blue economy. The integration of climate change adaptation into Libya's fisheries and aquaculture sectors is both an urgent necessity and a long-term opportunity.

5.7. Recommendations for addressing climate change in Libya's fisheries and aquaculture sector:

Climate change presents growing risks to Libya's marine and inland aquatic ecosystems, fisheries resources, and aquaculture activities. While Libya ratified the Paris Agreement in 2021, its climate policy engagement remains limited, most notably due to the absence of Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and sector-specific climate strategies. This leaves critical gaps in climate adaptation planning for the blue economy, despite Libya's vast Mediterranean coastline, increasing reliance on food imports, and its vulnerability to coastal and marine climate stressors. To address this, the following set of recommendations aims to promote integrated, climate-resilient governance and investment in the fisheries and aquaculture sectors.

a) Integrate fisheries and aquaculture into national climate policies

Libya should integrate fisheries and aquaculture into its overarching national climate change policies. Future NDCs and NAPs should explicitly list these sectors as climate-sensitive and outline tailored adaptation priorities. National-level climate strategies must also reflect the vulnerabilities of coastal and inland ecosystems, especially those that support fish-dependent livelihoods. Such integration would enhance sectoral visibility and ensure marine stakeholders are actively represented in climate policy dialogues.

b) Integrate sector-specific adaptation measures

Adaptation planning should incorporate sector-specific measures to address the distinct environmental pressures faced by aquatic systems. This includes strategies to mitigate rising sea temperatures, coastal erosion, increased storm frequency, and water salinity changes. Libya can promote resilient aquaculture systems by encouraging technologies like recirculating aquaculture systems (RAS), use of temperature-tolerant species, and low-water input systems, particularly in the eastern coastal regions where pilot projects are already underway.

c) Strengthen institutional capacity

Institutional capacity remains a major barrier to climate resilience in the sector. There is a need to build the knowledge and technical capabilities of government agencies, extension officers, and local fishery institutions. Governance frameworks must mainstream climate adaptation across fisheries and aquaculture policies, ensuring coordinated planning and risk management across ministries.

d) Strengthen monitoring, data collection, and research

Robust data collection and monitoring systems are essential to enable evidence-based planning and real-time responses to climate threats. Establishing a national monitoring system to track sea surface temperatures, fish migration patterns, and aquaculture health is critical. Partnerships with universities, NGOs, and regional scientific bodies can improve data access and expand the use of climate vulnerability assessments and forecasting tools.

e) Promote climate-smart aquaculture practices

Climate-smart aquaculture presents a promising opportunity to improve resilience and productivity. Scaling up technologies such as solar-powered aeration, offshore cages, and thermal-resistant species can enhance sector performance. These innovations should be prioritized for investment and piloting through public-private partnerships and donor support.

f) Protect and restore aquatic ecosystems

Equally important is the protection and restoration of aquatic ecosystems that provide critical services for fisheries. Coastal and marine protected areas (MPAs), seagrass beds, estuaries, and freshwater zones should be safeguarded from pollution and unregulated exploitation. Marine spatial planning tools can help integrate environmental safeguards with development priorities.

g) Enhance stakeholder collaboration and capacity building

Stakeholder engagement and participatory planning are also vital. Multi-stakeholder platforms involving government bodies, research institutions, civil society organizations, and coastal communities should be established to foster inclusive governance and knowledge exchange. Stronger communication channels will also enable co-designed and community-responsive adaptation strategies.

h) Develop early warning systems for climate risks

Early warning systems should be introduced to alert fishing communities and aquaculture operators to marine climate hazards such as storms, sea surface anomalies, or algal blooms. These systems would reduce losses, safeguard equipment and infrastructure, and build long-term adaptive capacity.

i) Promote regional and Mediterranean cooperation

Regional cooperation must be deepened. Libya should strengthen its collaboration with entities like the GFCM, WestMED Initiative, and AU-IBAR to exchange policy innovations, build shared resilience strategies, and align with continental adaptation frameworks. Regional partnerships are especially important for managing transboundary fish stocks and marine biodiversity under climate stress.

j) Leverage climate financing mechanisms

Libya should tap into international climate financing mechanisms such as the Green Climate Fund (GCF), the Adaptation Fund, and the FAO Blue Transformation Initiative. These funds could support climate-resilient port infrastructure, aquaculture innovation, community-based fisheries adaptation, and the scaling of pilot projects. Particular emphasis should be placed on enabling small-scale producers to adopt climate-resilient practices and access markets sustainably.

Table (38) Summary of climate change recommendations for Libya's fisheries and aquaculture sector

Focus Area	Key Recommendation	Expected Outcome
Policy Integration	Include fisheries/aquaculture in NDCs, NAPs, climate policies	Climate-sensitive sectors prioritized in national adaptation plans
Adaptation Planning	Design sector-specific adaptation strategies (e.g., storm mitigation, temperature resilience)	Increased adaptive capacity and reduced losses in fisheries/aquaculture
Institutional Capacity	Train officials; develop climate-smart governance frameworks	Improved planning, implementation, and resilience at all levels
Monitoring and Research	Develop monitoring systems; collaborate with scientific partners	Data-driven decisions and timely climate response
Climate-Smart Aquaculture	Promote innovative systems (RAS, solar, offshore cages)	Enhanced productivity and sustainability in aquaculture
Ecosystem Protection	Safeguard critical habitats; implement marine spatial planning	Biodiversity preservation and long-term ecosystem health
Stakeholder Collaboration	Facilitate multi-stakeholder dialogue and planning	Inclusive adaptation strategies and better coordination
Early Warning Systems	Establish marine hazard alert platforms	Protection of livelihoods and infrastructure

Regional Cooperation	Strengthen collaboration with GFCM, WestMED, AU-IBAR	Policy alignment, shared strategies, and technical support
Climate Financing	Mobilize GCF, Adaptation Fund, FAO support	Investment in infrastructure, innovation, and support for vulnerable producers

These recommendations provide a roadmap for building a more adaptive and sustainable blue economy in Libya. By integrating climate risk management into policy and practice, the country can enhance food security, protect marine ecosystems, and increase community resilience in the face of rising environmental stress.

6. Overall conclusion:

Libya possesses immense potential in its fisheries and aquaculture sector due to its extensive Mediterranean coastline, vast exclusive economic zone (EEZ), and favorable climatic and oceanographic conditions. However, this potential remains largely untapped due to structural, legal, and institutional challenges that have hindered the sector's development for decades.

Despite recent efforts, such as the establishment of the National Project of Aquaculture (NPA), the revival of the Ministry of Marine Resources, and the development of strategic plans, the national frameworks are still only partially aligned with the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS), the Comprehensive Africa Agriculture Development Programme (CAADP), and global environmental and climate agreements.

The review highlights several persistent challenges: outdated legal instruments (notably Law No. 14 of 1989), limited enforcement capacity, lack of coherent Monitoring, Control, and Surveillance (MCS) systems, underdeveloped value chains, and inadequate investment in infrastructure, capacity building, and climate change adaptation. Moreover, small-scale fisheries—which account for over 85% of domestic production, remain marginalized in national development planning, with weak organizational structures and minimal support services.

Climate change poses an additional, intensifying risk, threatening marine ecosystems, coastal livelihoods, and national food security. While projects like SECCAR and CASEP offer a foundation for integrating climate adaptation into national planning, Libya has yet to finalize or submit a National Adaptation Plan (NAP) or articulate climate resilience strategies that directly support fisheries and aquaculture.

On the positive side, Libya's participation in regional and international initiatives (e.g., GFCM, WestMED, AU-IBAR) and recent steps toward regulatory modernization and aquaculture investment demonstrate political will and institutional momentum. Additionally, stakeholder

engagement across government, academia, and the private sector suggests growing awareness of the sector's strategic importance.

To unlock the full potential of its blue economy, Libya must urgently undertake a comprehensive legal and policy reform process, align its national strategies with the PFRS and CAADP guidelines, and mainstream fisheries and aquaculture into broader climate change, food security, and economic development agendas.

Main results per deliverable

Deliverable 1: Alignment of National Fisheries and Aquaculture Policies with the PFRS

Key results:

- Moderate alignment across most of the 8 PFRS policy areas, with strong areas in *regional cooperation* and *conservation*, but weak areas in *high seas governance* and *cross-cutting issues (gender, climate, private sector)*.
- Policy Gaps: The main national law (Law No. 14 of 1989) is outdated and does not incorporate modern PFRS principles such as climate resilience, small-scale fisheries promotion, or value chain development.
- Weak institutional coordination among the Ministry of Marine Wealth, Ministry of Agriculture, and Environment bodies.
- Low engagement of the private sector and limited capacity in Monitoring, Control and Surveillance (MCS).

Key recommendations:

- Update and harmonize legal frameworks with PFRS.
- Establish a multi-stakeholder national fisheries council.
- Develop a national fisheries and aquaculture strategy focused on inclusiveness and climate resilience.

Deliverable 2: Assessment of National Instruments vs. International and Regional Agreements

Key results:

- Libya has ratified major agreements like UNCLOS and PSMA, but implementation is weak due to institutional, operational, and technical challenges.
- Libya has not ratified the BBNJ Agreement and lacks implementation protocols for VG-SSF and the FAO Code of Conduct for Responsible Fisheries.

- Institutional fragmentation and a lack of clear national coordination mechanism for PSMA enforcement.

Key recommendations:

- Designate official PSMA ports and train inspectors.
- Create a national task force for implementing international fisheries obligations.
- Accelerate ratification of the BBNJ agreement and adopt ecosystem-based fisheries management approaches.

Deliverable 3: Alignment of Libya's NAIP and climate policies with PFRS and Blue Economy Strategy

Key results:

- Fisheries and aquaculture are absent from Libya's NAIP and broader agricultural investment planning.
- Climate adaptation plans lack reference to marine ecosystems, fishers, or aquaculture systems.
- Significant missed opportunities to integrate blue economy in food security and climate change strategies.

Key recommendations:

- Revise the NAIP to include fisheries and aquaculture value chains, especially for women and youth.
- Develop sector-specific climate adaptation strategies (e.g., for sea surface warming, saline intrusion).
- Leverage regional platforms (WestMED, GFCM) and financing mechanisms (GCF, FAO) for blue economy investment.

Summary of key points and strategic directions

Key points to bear in mind:

1. Libya's marine wealth is underutilized despite favorable resources, due to outdated laws, weak coordination, and low investment.
2. Policy and regulatory alignment with the PFRS is partial, and urgently needs modernization.
3. Climate change threatens fisheries and aquaculture, but current national adaptation strategies do not include the sector.

4. Regional cooperation and pilot aquaculture projects show potential, but require scaling.

Main directions to take into account:

- Develop a unified national fisheries and aquaculture strategy aligned with PFRS and Agenda 2063.
- Revise and update Law No. 14 of 1989 to reflect international standards and address current sectoral needs.
- Integrate fisheries and aquaculture into the National Agricultural Investment Plan and upcoming climate adaptation frameworks (NDC/NAP).
- Strengthen institutional governance, especially PSMA implementation, port inspections, and enforcement systems.
- Expand climate-resilient aquaculture (e.g., offshore cages, salt-tolerant species) and support women and youth inclusion.

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Appendix 1: Adapted Framework

FRAMEWORK TO AID IN THE REVIEW OF (Libya) FISHERIES AND AQUACULTURE POLICIES AND LAWS USING THE PFRS, REGIONAL INSTRUMENTS AND GLOBAL BEST PRACTICES AS BENCHMARKS

Documents Used in the development of the Framework:

1. A Guide for The Implementation of the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa

Documents Perused:

1. Strategic Plan of the Ministry of Marine Wealth 2017-2022
2. Executive Regulations of Law No. 14 on the Exploitation and Regulation of Marine Wealth
3. National Monitoring Program for Biodiversity in Libya. 2016

Overall Level of Alignment:

Computed Alignment of Policy Areas:

1. POLICY AREA 1: Conservation and Sustainable Fisheries and Aquaculture Resource Use: -
2. POLICY AREA 2A: Small Scale Fisheries Development: -
3. POLICY AREA 3: Sustainable Aquaculture Management: -
4. POLICY AREA 4: Responsible and Equitable Fish Trade and Marketing: -
5. POLICY AREA 5: Regional and Sub-Regional Cooperation: -
6. POLICY AREA 6: Awareness Enhancing and Human Capacity Development: -
7. POLICY AREA 7: High Seas Fisheries: -
8. POLICY AREA 8: Cross Cutting Issues in African Fisheries and Aquaculture: -

Alignment Scoring:

Note: Alignment Scoring, a 'Yes' is given unit (1) score, 'In part' is assigned 0.5 and 'No' is given zero (0). Percent averages are computed for the various policy outcomes, policy areas, as well as the entire framework.

POLICY AREA 1: CONSERVATION AND SUSTAINABLE FISHERIES AND AQUACULTURE RESOURCE USE										
Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	Comment and Reference
		YES	**IN PART**	**NO**	**%**	**YES**	**IN PART**	**NO**	%	
Outcome 1: Policies, frameworks and tools in place to sustainably increase national benefits from fisheries and aquaculture					**37.75**				**45.83%**	
1	***Fisheries and aquaculture are mainstreamed into national development***									
	a. Member States increase allocation of national budgets to fisheries and aquaculture	1	3	7	20%			X	0%	% of the total state operation budget (1910-2023) is 0.26%. and 0% of the developemnt budget.
	b. The aquaculture development programme focus on areas where market-led aquaculture investments and developments are underway and accelerated rates of aquaculture production are being achieved, or great potentials exist?	3	3	6	37.5%			X	0%	Limited aquaculture production, and it is only from private sector.
	c. The state focus on strengthening the private and public sectors' capacity to develop comprehensive and realistic strategic plans and	2	7	3	45.8%		X		50%	There was a number of tries to promote the

	their implementation in the short to medium term?									private sector role in operating the sector.
	d. The State encourage the development, expansion or introduction of new and proven production techniques	3	6	3	50%		X		50%	
	At regional level: *a. harmonize policy, institutional, legal, regulatory, and monitoring regimes to govern aquaculture operations that occur in waters that go beyond national jurisdiction*	3	5	4	45.8%	X			100%	
	b. endorse and apply standards and norms on aquatic animal health: fish disease, safety, quality and traceability	1	4	7	25%	X			100%	
	c. implement quarantine measures for the introduction of exotic and genetically modified genomes	4	4	4	50%		X		50%	
	d. elaborate mechanisms to support and harmonize the activities of regional aquaculture and capture fisheries bodies	1	7	4	37.5%		X		50%	
2	*Globally accepted best practices integrated into national policy frameworks and tools* *a. Does the policy promote globally accepted best practices and pursuing excellence in fisheries*	2	7	3	45.8%		X		50%	

	science and integrated evaluations? *b. Does it promote effective management, improved product processing, utilization and technology transfer?*	2	4	6	33.3%			X	0%	
3	*Are policy and management decisions made based on the existence of reliable data and information management systems?*	2	3	7	29.1%		X		50%	
4	*Adoption of participatory fisheries management mechanisms/approaches*	2	4	6	33.3%		X		50%	FAO (2021). Review of the status of Mediterranean and Black Sea fisheries (GFCM): The report notes that Libya's fisheries governance is still highly centralized, with limited decentralization or co-management mechanisms in place. "Informal systems of community-based regulation exist in some parts of Libya but lack any formal support or capacity building." UNDP Coastal Livelihoods Assessment, 2023
Outcome 2: **Effective and sustainable national and regional Monitoring, Control and Surveillance systems in place to ensure that sustainable benefits are realized**					**41.6%**				**50%**	
1	*Are there aspects of MCS in place?*	3	4	5	41.6%		X		50%	Surveillance activities are carried out by different bodies (e.g., Libyan Coast Guard, Navy, and the General Authority for Marine Wealth) with limited collaboration, overlapping

										mandates, and unclear responsibilities. "In Libya, fisheries control and monitoring are limited, with scarce cooperation between the navy, coast guard, and fisheries authority. Efforts are reactive, not preventive." GFCM Country Profile – Libya, 2021 Reports on capacity-building for Libyan maritime institutions stress the reactive nature of MCS and the lack of functional coordination mechanisms between the Libyan Coast Guard and fisheries authorities. Highlighted issues: Maritime security dominates over fisheries enforcement. Fisheries-specific MCS is undermanned and underfunded. UNODC & IMO (2020–2023)
2	*Are there mechanisms in place for efficient and effective regional cooperation on fisheries MCS?*	2	6	4	41.6%		X		50%	GFCM coordinating fisheries management, data sharing, and MCS efforts. Key MCS-related initiatives: Regional Plan of Action to combat Illegal, Unreported and Unregulated (IUU) fishing (RPOA-IUU). Joint Inspection and Surveillance Scheme Development of VMS standards and port inspection protocols. Libya is a GFCM contracting party but has not yet fully implemented the recommended MCS tools or actively participated in regional joint inspections. Libya participates in REMPEC MedSudMed and CoPeMed

										initiatives, but integration with fisheries enforcement remains weak
Outcome 3: Healthy ecosystems to support sustainable fisheries and aquaculture					**62.46%**				**100%**	
1	*Are Scientific research (natural, social, economic and technological) that support fisheries management and aquaculture development in place?*	5	5	2	62.5%			X	100%	
2	*a. Are there tools and programs in place to protect fishery resources and their habitats?*	6	4	2	66.6%			X	100%	Fishery Closure Zones (Temporal or Spatial Bans): Seasonal fishing bans are occasionally applied (e.g., for shrimp or sardines), but they are: Not always science-based. Poorly monitored. Also there are legal restrictions on use of explosives and poisons. use of illegal nets (e.g., very fine mesh sizes). harvesting of protected species (e.g., some sharks, turtles), though enforcement is weak. These measures are declared by the General Authority for Marine Wealth, but without detailed stock assessments. Libya has benefited from regional ecosystem-based fisheries projects, such as: FAO MedSudMed: GFCM research programs: These programs have provided: GIS tools, habitat models, and technical assistance for stock recovery.
	b.Are there measures to adhere to national, regional and international pollution instruments, standards and practices, especially regarding chemical products and plastics?	5	4	3	58.3%			X	100%	multilateral environmental agreements (MEAs) related to pollution: Barcelona Convention (UNEP/MAP), Protocol for the Prevention of Pollution from Land-Based Sources (LBS Protocol). Stockholm Convention and Basel Convention. Libya participates in MedPOL (Mediterranean Pollution Monitoring and Research Program under UNEP/MAP).also engaged in GEF-funded projects on marine litter

										and chemical safety. At regional level, there are significant number of projects under the Global Environment Facility (GEF) Trust Fund (20 in total - 10 primarily on International Waters Focal area and 7 with multiple focus areas including Internal Waters with Biodiversity, Chemical and Waste and Persistent Organic Pollutants). Nationally; there are regulations on: Disposal of hazardous chemicals, Wastewater discharge, Plastic bag usage (some municipal bans exist). Pollution monitoring is conducted by EGA laboratories, MBRC, some chemical monitoring is conducted in cooperation with UNEP/MAP and GEF projects.

POLICY AREA 2A: SMALL SCALE FISHERIES DEVELOPMENT										
Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	Comment and Reference
		YES	**IN PART**	**NO**		**YES**	**IN PART**	**NO**		
Outcome 1: **Role and importance (contribution) of fisheries for improved livelihoods, food and income of small-scale fishing communities and related operators are evident, recognized and secured in Member States**					**31.22%**				**12.5%**	
1	*Are there mechanisms and strategies that highlight the economic and social importance of small-scale fisheries development?*	2	5	5	37.5%			X	0%	General policy documents from the Ministry of Marine Wealth acknowledge the economic importance

										of artisanal fisheries, especially in employment and food security, but do not outline concrete programs or investment plans. The General Authority for Marine Wealth (GAMW) oversees licensing and some support functions, but has no clear roadmap for SSF empowerment, modernization, or value chain development.
2	*Are there mechanisms and strategies to unlock and unleash potentials of the subsector to generate socio-economic benefits?*	2	4	6	33.3%		X		50%	
3	*Is there a system to facilitate organized value chain development in order to effectively derive the benefits from small-scale fisheries?*	2	3	7	29.1%			X	0%	
4	*Are small Scale Fisheries prioritized in National Agricultural Investment Plans (NAIP), Poverty alleviation documents and National strategy documents, etc.?*	1	4	7	25%			X	0%	
Outcome 2: **Bilateral and regional cooperation for effective management of shared fishery resources and ecosystems is strengthened**					**39.55%**				**25%**	

1	*Are there provisions for the adoption and implementation of Regional and intra-regional minimum terms and conditions for access?*	1	5	6	29.1%			X	*0%*	National Conditions for Foreign Vessel Access (Article 13, Law No. 14/1989): Foreign vessels must meet specific national licensing conditions, such as: Being licensed in their country of registration. Meeting technical and health standards. Paying fees and submitting voyage and catch reports. Unloading catches in designated Libyan ports. Obtaining authorization for transshipment and ensuring insurance. These national-level requirements reflect a sovereign effort to control access but do not reference alignment or harmonization with regional minimum terms and conditions, such as those agreed upon under regional fisheries bodies (e.g., GFCM, AU-IBAR frameworks, or COMESA regional fisheries policies).
2	*Are there mechanisms in place for efficient and effective regional cooperation on fisheries management, including MCS, migratory and shared stocks?*	3	6	3	50%			X	50%	
Outcome 3: **Fishers are organized to foster good fisheries governance, sustainable development and responsible use of natural resources**					**47.65%**				**50%**	
1	*Are the international Guidelines for Securing Sustainable Small-scale Fisheries appropriately applied?*	2	7	3	45.3%		X		50%	Recognition of Small-Scale Fishers: Law No. 23/1991 supports fishers' cooperatives, which aligns with the SSF Guidelines' emphasis on

										organizing and empowering small-scale fishers. Legal Inclusion: Small-scale fisheries are implicitly covered through regulations on licensing, cooperative formation, and local landing obligations (e.g., under Law No. 14/1989). Gender and Vulnerable Groups: There is no direct legal or policy framework in place promoting gender equity or supporting vulnerable groups in fisheries, a major pillar of the SSF Guidelines. Social Development and Livelihoods: There are limited national mechanisms to link fisheries policy with broader poverty reduction, food security, or rural development strategies. Access Rights and Tenure: The laws don't explicitly recognize or protect customary tenure systems or traditional access rights, nor do they address the SSF Guidelines' recommendations on equitable access to resources.
2	*Are provisions made for the capacity of fisheries stakeholders and institutions for participatory management of the fisheries to be developed and nurtured?*	1	5	6	50%		X		50%	Cooperatives as entry points: Law No. 23/1991 empowers cooperatives as formal structures that can potentially facilitate participatory management and local stakeholder engagement. However, their effectiveness is variable and under-resourced. Institutional gaps: There is no dedicated institution or strategy for capacity building of stakeholders (especially small-scale fishers, youth,

										or women) in resource governance or management. No explicit participatory governance model: Legal texts do not require multi-stakeholder forums, local co-management councils, or consultative processes for management decisions, as recommended in the SSF Guidelines. Training and education: While some education programs are run by the national institutions, and some training programs run by international partners (e.g., FAO, GFCM), but still not enough.

POLICY AREA 3: SUSTAINABLE AQUACULTURE MANAGEMENT										
Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	
		YES	**IN PART**	**NO**		**YES**	**IN PART**	**NO**		
Outcome 1: Improved market-led aquaculture investments					**41.63%**				**50%**	
1	*Are market campaigns included for aquaculture products (awareness creation, PPPPs – Price, Place, Promotion and Product)?*			12	0%			X	%	
2	*Aquaculture infrastructure- Are there measures for the state to provide basic infrastructure for aquaculture development?*	2	7	3	45.8%		X		50%	Hatcheries and farms are exist, but No functional aquaculture zones; poor infrastructure maintenance.

3	*Financing/investment strategy - Are there strategies for the promotion of financial instruments such as guarantee funds, micro-credit institutions?*	1	2	8	16.6%			X	50%	
4	*Quality assurance and standards* - Are there provisions for aquaculture product labelling and traceability through certification programs?	6	4	2	66.6%		X		50%	The National Center for Food and Drug Control (NCFDC) in Libya is the official authority responsible for monitoring the quality and safety of food and pharmaceuticals, including products of aquatic origin such as aquaculture products. The center was established under Decision No. 77 of 2002 as an independent institution with legal personality, tasked with implementing regulatory and monitoring functions to ensure the safety of food and drugs for the public. Also steps have been taken by NPA
5	*Skills development plan - Are there provisions in the policy for aquaculture development plan and strategies to appropriately address competencies and skills development?*	3	6	3	50%		X		50%	There is *Skills development plan* that conducted by NPA, Lack of fund
6	*Research and Extension Services - Are there provisions of adequate funding for research to enhance technology development and innovation?*	3	8	1	58.3%		X		50%	research related to fisheries and aquaculture is primarily carried out by the Marine Biology Research Centre (MBRC). dedicated and sustained funding for applied research and innovation remains limited.
7	*Fish farmers associations or cooperatives- Is there the existence of an institutional framework to allow Fish farmers*	3	7	2	54.1	X			100%	Law No. 23 of 1991 on Cooperative Societies

	associations and cooperatives to flourish?									
8	*Enabling environment – Is there provision of policy and institutional framework as well as one stop shop to facilitate registrations and investments by the private sectors?*	4	6	2	58.3%	X			100%	Libya has a set of laws and decisions regulating the aquaculture sector, including: Law No. 14/1989 regulating marine wealth. Decision No. 71/1990 issuing the executive regulations for aquaculture and marine resource exploitation. The National Project of Aquaculture (NPA) plays a semi-institutional role in policy implementation and technical support. The NPA has developed 12 official forms to organize aquaculture activities (e.g., farm establishment, import of fry/brood stock, licensing).
9	*Growth in trade of locally produced aquaculture products- Are there measures for the protection of local aquaculture products from imported products?* *Are there programs in place to increase competitiveness of locally produced aquaculture products?*	1	4	7	25%			X	0%	
Outcome 2: **Improved regional cooperation in shared ecosystems**					**29.31%**				**16.6%**	
1	*Common strategies on management and research on transboundary Resources - Are there provisions to harmonize coherent policies, institutional and legal frameworks*	1	5	6	29.1%			X	0%	Libya is part of GFCM, WestMED, and collaborates with AU-IBAR and FAO, but lacks aquaculture-specific regional strategies.

	for aquaculture shared ecosystems?									
2	*Are the policies consistent with best ecosystems management approaches (e.g. FAO, EAF, EAA, CCRF)?*	2	5	5	37.5%		X		50%	Code of Conduct for Responsible Fisheries (CCRF): Reflected in Libya's laws that emphasize sustainability, licensing, and regulation of fishing activities (e.g., Law 14/1989, Executive Regulations 71/1990). Precautionary and Responsible Practices: The National Project of Aquaculture has published a handbook including procedures and environmental considerations for aquaculture farms. Control of Access and Licensing: Licensing of foreign and local fishing vessels is clearly regulated, including conditions that prevent IUU fishing and environmental harm. onitoring and Data Collection : Licensing requires submission of catch reports and data, and foreign vessels must report fishing zones and quantities.
3	*Conformity with accreditation mechanisms- Are the Best Management Practices (BMPs) required for certification and standardization for sustainable aquaculture practices included in the policies?*	1	3	8	20.8%			X	0%	

	POLICY AREA 4: RESPONSIBLE AND EQUITABLE FISH TRADE AND MARKETING

Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	Comment and Reference
		YES	IN PART	NO		YES	IN PART	NO		
Outcome 1: **Improved intra and inter regional trade**					**36.06%**				**50%**	
1	*Is there compliance with agreed regional trade protocols and regulations?*	2	6	4	41.6%		X		50%	Libya is a member of COMESA (Common Market for Eastern and Southern Africa), which includes protocols for trade liberalization, rules of origin, and sanitary/phytosanitary measures. Libya is a contracting party to ICCAT (International Commission for the Conservation of Atlantic Tunas), and a member of the General Fisheries Commission for the Mediterranean (GFCM), aligning with trade and sustainability standards. The National Center for Food and Drug Control is active in inspecting and certifying food safety, a key element in meeting international export requirements.
2	*Is it coherent with fish trade policies and other policies?*	1	4	7	25%		X		50%	fragmented across several government bodies, Ministry of Marine Wealth Municipalities and Central Markets Ministry of Economy and Trade
3	*Is it Compliant with sanitary standards and market requirements?*	3	4	5	*41.6%*		X		50%	he National Center for Animal Health in Libya is a governmental body under the Ministry of Agriculture, Livestock and Marine

										Resources. It plays a central role in regulating and monitoring animal health, including aquatic animal health relevant to aquaculture and fisheries. Key Roles and Functions: Veterinary Certification. Ensures compliance with international standards. Disease Monitoring and Control. Oversees biosecurity measures and disease outbreak responses. Coordination with International Bodies Plays a role in Libya's efforts to align with sanitary and phytosanitary (SPS) requirements for trade, especially for regional and future international exports.
Outcome 2: **Increased competitiveness for African fish and fishery products**					**34.98%**				**50%**	
1	*Economically efficient fisheries sector - Are fisheries sustainably managed and supported by appropriate infrastructure and prudent macroeconomic management?*	2	5	5	*37.5%*		X		50%	

2	*Standards and supportive technology - Is infrastructure, such as the National fisheries quality control laboratory for standardization of fishery products in place? Does it conform to international guidelines for certification of fishery products?*	2	3	7	*25%*		X		50%	Institutional Infrastructure: National Center for Food and Drug Control. National Center for Animal Health, Marine Biology Research Centre
3	*Competitiveness through increasing value chain efficiencies - Are there appropriate pricing conditions for value addition across value chain segments?*	1	5	6	*29.1%*			*X*	*50%*	*Few processing plants; no innovation incentives.*
4	*Coherence of trade policies (harmonization) - Are national trade policies coherent and harmonized at sub regional or regional levels?*	3	5	4	*45.8%*			*X*	*50%*	*Evidence of Harmonization* *Membership in Regional Trade Agreements:* *COMESA (Common Market for Eastern and Southern Africa): Libya is a member and thus committed to regional trade integration, tariff harmonization, and policy coherence within the bloc.* *Greater Arab Free Trade Area (GAFTA): Libya participates in GAFTA, which promotes intra-Arab trade through tariff reductions and unified standards.* *Customs and Tariff Policies:* *Libya has adopted the Arab Customs Union guidelines to some extent and has been working to simplify trade procedures in line with regional best practices.* *Bilateral and Multilateral Agreements:* *Libya has signed trade cooperation agreements with neighboring countries (Tunisia, Egypt, Algeria) aiming to facilitate agricultural and fisheries product exchange.*

5	*Consumer Information - Is symmetric information ensured between buyers and sellers?*	2	5	5	*37.5%*		X		50%	Consumer Protection Committee was only recently established. Draft Law No. 2 of 2022 on Consumer Protection includes provisions to prohibit the import of products that do not meet safety, health, and environmental standards. This enhances consumer protection and promotes transparency.

	POLICY AREA 5: REGIONAL AND SUB-REGIONAL COOPERATION									
Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	Comment and Reference
		YES	**IN PART**	**NO**		**YES**	**IN PART**	**NO**		
Outcome 1: International fisheries issues at regional levels are coherent and harmonized					**34.7%**				**50%**	
1	*Are there provisions for entrenched awareness of important international instruments for sustainable fisheries management and frameworks that identify the need for their domestication in realizing sustainable fisheries management?*	1	4	7	*25%*		X		50%	Absence of national legal and policy frameworks aligned with PFRS and global instruments. Some NGOs are active in this regard.
2	*Are there measures in place to address Illegal, Unreported and Unregulated (IUU) fishing?*	3	3	7	*37.5%*		X		50%	Based on my search in Law No. 14 of 1989 and the other files you provided, I did not find explicit, detailed measures specifically targeting Illegal, Unreported, and Unregulated (IUU) fishing under that name or international terminology.

										it include general measures for fisheries management and enforcement, such as: Licensing requirements for fishing vessels and operations Regulations on fishing zones and allowed fishing methods Penalties for violations of fisheries regulations These measures can indirectly contribute to addressing IUU fishing by setting legal boundaries and enforcement mechanisms. But there is no direct reference to IUU fishing as a formal concept or to international agreements like the FAO International Plan of Action to Prevent, Deter and Eliminate IUU Fishing (IPOA-IUU).
3	*Are there mechanisms to address seafood fraud?*	2	6	4	*41.6%*		X		50%	
Outcome 2: **RECs and RFBs are positive forces for fisheries management within the framework of regional economic and political integration agenda**					40.2%				50%	
1	*Are there mechanisms for linkages between RECs and RFBs?*	4	6	2	*41.6%*		X		50%	Libya engages in GFCM, WestMED, AOAD, UfM, and COMESA (member), but lacks formalized interlinkages.
2	*Are RECs and RFBs vehicles to promote a well-defined fishery and aquaculture?*	3	4	5	*41.6%*		X		50%	Weak implementation

3	Are there strategies and mechanisms in place for preventing and resolving regional conflicts?	3	3	6	*37.5%*	X			50%	**Decree No. 37 (2005)** established a **Libyan Fisheries Protection Zone** in the Mediterranean Sea. **Decree No. 260 (2009)** declared the **Libyan Exclusive Economic Zone (EEZ)** in accordance with international maritime law.

POLICY AREA 6: AWARENESS ENHANCING AND HUMAN CAPACITY DEVELOPMENT										
Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	Comment and Reference
		YES	**IN PART**	**NO**		**YES**	**IN PART**	**NO**		
Outcome 1: Enhanced sectoral competencies and proficiencies					**36.06%**				**33.33%**	
1	***Continuous professional education, mentorship and training*** *- Are there provisions to facilitate continuous awareness and enabling environment to seize and utilize opportunities for sectoral development*	3	5	4	45.8%		*X*		*50%*	*Short-term trainings exist, but no institutionalized or continuous system for professional development. Lacks national mentorship programs.*
2	***Accreditation of practitioners and institutions*** *- Are there provisions for relevant stakeholders/institutions to be accredited to maintain relevance?*	1	3	8	29.1%			*X*	*0%*	***No formal national accreditation system*** *currently exists for practitioners (such as aquaculture technicians, fishery*

										inspectors, or hatchery operators) in the fisheries and aquaculture sector. ***Educational institutions*** *(e.g., agricultural and marine sciences faculties) are not subject to sector-specific accreditation or evaluation in relation to fisheries/aquaculture competencies.* ***Training programs*** *offered by the National Project for Aquaculture and foreign partners (e.g., FAO, AOAD) lack standardization and are not formally recognized or certified by a national body.* ***Licensing authorities*** *(e.g., the Ministry of Agriculture) issue activity-based permits (e.g., for aquaculture or importation of fry), but these are not tied to professional qualifications or accredited training.*
3	*Facilitate centers of excellence of fisheries and aquaculture - Provision in the national and regional policies that ensures continual establishment, development and maintenance of minimum operating standards*	2	4	6	33.3%		X		50%	
Outcome 2: **Improved evidence-based decision making**					**45.8%**				**50%**	
1	*Is Information based policy decision making evident in the policy?*	2	7	3	45.8%		X		50%	

2	*What provisions exist to facilitate Information sharing between policy makers and policy consumers?*	2	7	3	45.8%		X		50%	

POLICY AREA 7: HIGH SEAS FISHERIES										
Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	
		YES	**IN PART**	**NO**		**YES**	**IN PART**	**NO**		
Outcome 1: Greater African Voice in high seas fisheries					**53.34%**				**80%**	
1	*Is there an avenue for effective participation of the MS in international deliberations, meetings, etc. and increased access to high seas fisheries?*	5	6	1	66.7%	X			100%	Libya participates in many Regional Fisheries Management Organizations (RFMOs) such as GFCM, WestMED, AU_IBAR, and ICCAT, but capacity gaps limit broader engagement.
	Have provisions been made for the MS to become a member or cooperating party of appropriate RFMOs?	5	5	2	62.5%	X			100%	
	Are there modalities/provisions for the country to ratify United Nations Convention on the Law of the Sea and the FAO Port States Measures Agreement?	5	5	2	62.5%	X			100%	
2	*Are there mechanisms for strengthening the alignment of donor and partner efforts with PFRS?*	2	5	5	37.5%		X		50%	
3	*Are there provisions for strengthening of Alignment to and co-ordination of*	2	5	5	37.5%		X		50%	

	development partners' efforts with the PFRS?									
Outcome 2: Increased participation and benefits for MS in high seas fisheries					**50%**				**50%**	
1	*Increased access to high seas fisheries -Is there a provision made in the policy that ensures high seas resource exploitation by MS?*	3	6	3	50%			X	50%	
2	*Accrued benefits to concerned MS increased - Are there programmes and strategies proposed0 to increase investment for economic value addition (such as harbour)*	3	6	3	50%			X	50%	
Outcome 3: Active participation of MS in RFMOs processes and agenda					**41.4%**				**50%**	
1	*Cooperation for high sea fisheries management - What provisions are there to facilitate management decisions for active roles in intergovernmental cooperation?* *Are there modalities guiding the participation in newly established partnerships?*	1 2	9 5	2 5	45.3% 37.5%			*X* *X*	*50%* *50%*	

POLICY AREA 8: CROSS CUTTING ISSUES IN AFRICAN FISHERIES AND AQUACULTURE
A. Strengthening resilience and reducing vulnerabilities to climate change in African fisheries and aquaculture

Criteria for Alignment		Result from 12 respondents			Level of Alignment (%)	Results from documents			Level of Alignment (%)	
		YES	IN PART	NO		YES	IN PART	NO		
OUTCOME 1: Adaptive capacity and resilience at the local level built					**29.16%**				**10%**	
1	*Capacity building programme on climate smart fisheries - Is there promotion of capacity building in the sector on climate change?*	2	5	5	37.5%		X		50%	Training and awareness on climate change in the fisheries sector are not systematic or widely integrated into national strategies. Occasional workshops and capacity building initiatives have been held, mostly driven by external partners such as FAO and GFCM. The National Project of Aquaculture and other public entities have focused more on production and licensing rather than climate resilience or adaptation.
2	*Communication systems- Are there systems on participatory Climate Change (CC) and Disaster Risk (DR) vulnerability assessment and aquaculture development?*	2	5	5	37.5%			X	0%	General Risk Assessments: The Libyan Meteorological Center and Environment Ministry conduct general coastal and weather risk monitoring. Lack of Fisheries Focus: These assessments do not specifically include fisheries or aquaculture actors, nor do they apply participatory vulnerability assessments (e.g., VCAs, CVCA). No Structured Community Engagement: No system currently ensures that fishers, aquaculture workers, or coastal communities are involved in vulnerability mapping. Marine Wealth Plan (2022–2024): Emphasizes aquaculture site expansion and port rehabilitation Does not discuss vulnerability to CC/DR explicitly or include any community-based resilience analysis

3	*Facilitate the creation of alternative livelihoods - Are there available opportunities for at least temporary shifting to alternative occupation in the event of shocks?*	1	4	7	25%			X	0%	The Marine Wealth Plan mentions promotion of fish farming, hatcheries, and inland aquaculture, which could serve as alternative livelihoods. Not Institutionalized: No national framework or contingency plan exists to systematically shift fishers to alternate employment during crises. No dedicated financial safety net, skills retraining program, or regional diversification plan exists for fisheries-dependent communities. The Marine Wealth Plan mentions reducing foreign dependency in labor by mobilizing youth, but does not mention shock-responsive livelihood planning.
4	*Early warning system in place as a focus for disaster - Are there provisions for early warning mechanisms at national level?*	1	3	8	20.8%			X	0%	
5	*Formulating mechanisms for disaster-related insurance and compensation*	1	4	7	25%			X	0%	
OUTCOME 2: Policy coherence and coordination at the national and regional levels improved					**36.06%**				50%%	
1	*Do the Disaster risk management (DRM) and climate change Adaptation (CCA) policies include fisheries and aquaculture?*	1	5	6	29.1%			X	50%	
2	*Do the Fisheries and aquaculture policies include DRM and CCA?*	1	5	6	29.1%		X		50%	The Marine Biology Research Center (MBRC) and some government departments are aware of the need for climate resilience and sustainable ecosystem management, but the institutional coordination and funding for DRM/CCA remain weak.

										Libya has ratified the UNFCCC and the Paris Agreement, and is a party to the Convention on Biological Diversity and the Ramsar Convention. These create a potential policy entry point to embed DRM and CCA into sectoral strategies like fisheries.
3	*Are there policies for marine spatial planning?*	2	8	2	50%		X		50%	No national policy, strategy, or legal framework for MSP. No intersectoral coordination mechanism between fisheries, oil and gas, tourism, conservation, and maritime transport. No geospatial data integration or marine zoning based on ecosystem sensitivity or socio-economic planning. Some MSP training and capacity-building activities organized by the (GFCM)
B. Gender and Youth										
OUTCOME 1: Increased access to resources		**YES**	**IN PART**	**NO**	**27.7%**	**YES**	**IN PART**	**NO**	**50%**	
1	*Do policies and interventions aim at attracting women and youth?* *Do they address key barriers and constraints to entry and access to land and water?*	1 1	5 5	6 6	29.1% 29.1%		X X		50% 50%	the establishment of Women's Empowerment Offices within the Ministry of Marine Wealth,
2	*Security of investment and access rights and ownership - Does the policy have provisions for the system to ensure security of investments and market certainty?*	1	4	7	25%		X		50%	

C. Private Sector Investments and Financing Mechanisms for Fisheries and Aquaculture in Africa										
OUTCOME 1: Improved enterprise performance within the fisheries and aquaculture sector		**YES**	**IN PART**	**NO**	**28.1%**	**YES**	**IN PART**	**NO**	**25%**	
1	*World Bank ease of doing business index - Compliance with WB for creating an*	2	4	~~6~~	33.3%			X	50%	Law No. 9 of 2010 promotes streamlined investment procedures and

	efficient and inclusive ethos for enterprise and business									offers incentives such as tax exemptions and simplified licensing through the General Authority for Investment Promotion. While these support enterprise creation, Libya's broader business climate still ranks low on the Ease of Doing Business Index due to challenges like bureaucracy, access to finance, and legal enforcement.
2	*Global competitiveness report of World Economic Forum - Does the policy Conform with the Global Competitiveness Report of World Economic Forum (WEF)?*	2	3	7	29.1%			X	0%	
3	*World Bank Fisheries Performance indicators - Does it align with the WB Fishery Performance Indicators (FPIs)?*	1	4	7	25%			X	0%	The legal framework and enforcement mechanisms are still under development, making it difficult to meet the World Bank's FPIs related to sustainable management. There is limited data on fisheries stocks, and monitoring, control, and surveillance (MCS) systems remain underdeveloped.
4	*Awareness of diversity of business structures - Are there provisions for awareness creation that enable practitioners and enterprise owners?*	1	4	7	25%			X	50%	The law No 9 2010 for investment supports competitiveness through investment incentives, but lacks sector-specific innovation and business dynamism frameworks. Libya scores low in WEF rankings due to macroeconomic instability and a weak innovation ecosystem.
OUTCOME 2: Improved private sector governance					**29.1%**				0%	
1	Consistency with industry best practices - Are the policies consistent with efficient	1	5	6	29.1%			X	0%	

	structures that enable effective and well-documented best practices?									

Appendix 2:

ASSESSMENT OF THE ALIGNMENT OF NATIONAL FISHERIES-AQUACULTURE STRATEGIES AND THE NATIONAL AGRICULTURAL INVESTMENT PLANS TO THE POLICY FRAMEWORK AND REFORM STRATEGY FOR FISHERIES AND AQUACULTURE IN AFRICA AND CLIMATE-CHANGE ADAPTATION

Alignment of NAIPs and RAIPs to climate Change and environmental management

Guidelines for Assignment

1. Does your country have a: (*Yes/No. If yes, give title, reference and share copy/URL link*)
   a. National Climate Change Adaptation Plan (NO)
   b. National Fisheries and Aquaculture Development Policy and Plan (YES) (PDF)
   c. National Environmental Management Policy and Plan (YES) LAW 15 (2003).
   d. National Agricultural Investment Plan (NO)

2. What does the National Climate Change Adaptation Plan describe and qualify (e.g. high, low risk)[1] the:

	climate-change vulnerabilities and risks	**Anticipated Risks**	**Proposed mitigation measures**
Overall/generally for the country	Identifies temperature rise, drought, water scarcity, extreme weather- high carbon emission	Decreased rainfall, increased evapotranspiration, desertification, heatwaves. disrupt the Earth's natural climate balance.	Integrated water resource management, solar energy, early warning systems
Aquatic ecosystems	Rising sea surface temperatures, coastal erosion, saltwater intrusion	Loss of marine biodiversity, damage to seagrass beds, acidification risks	Habitat protection, creation of marine protected areas (MPAs)

[1] As indicated in point 1, there is currently no formal National Climate Change Adaptation Plan. Nonetheless, significant efforts addressing climate change have been undertaken, albeit in a fragmented and uncoordinated manner. While some of these activities have not been systematically documented, their tangible outcomes are observable on the ground. Accordingly, the information presented in the table is not derived from an official plan but rather compiled from various initiatives implemented by multiple national agencies and non-governmental organizations.

Fisheries and aquaculture	Sea warming, changes in fish migration, inland water scarcity	Reduced productivity of key species, aquaculture stress, gear losses	Integrate fisheries into NDCs, NAIP, and climate finance frameworks

3. What does the National Fisheries and Aquaculture Development Policies/Plan say about climate change? *Can include other relevant documents/policies that influence fisheries and aquaculture development in your country*:

Libya's fisheries and aquaculture development policy framework does not explicitly or systematically address climate change, either as a risk factor or as an integrated planning priority. While climate-related language appears in broader national policies and environmental laws, most notably Law No. 15 (2003) on Environmental Protection

Name and Reference of Document	**Quote what document states on climate change in the sector** *(e.g. nothing, only mentions 'climate change under sections…., page#)*	**Remarks if any**
	Nothing	

4. May you elaborate the climate change risks and impacts identified in the documents above for the fisheries and aquaculture in the table below: (please specify whether referring to freshwater/marine aquatic environment)

Drivers	Biophysical Impacts	Implications for Fisheries and Aquaculture	Proposed Adaptation Measures
Changes surface water temperature	- Changes in species distribution (northward migration)- Coral bleaching and seagrass loss- Altered spawning periods and reproductive cycles. potential for reduced dissolved oxygen levels, leading to "dead zones	- Decline in local fish stocks (sardines, groupers, mackerel)- Disruption to artisanal fishers' catch patterns- Economic losses for coastal communities, increase the risk of diseases	- Promote adaptive fisheries management- Conduct stock assessments regularly- Diversify target species and fishing grounds maintaining and restoring wetlands, preserving coastal areas, utilizing "soft" shoreline maintenance, using extended detention wetlands for flood control and water quality benefits
Increased Salinity and	- Reduced freshwater inflows- Loss of brackish	- Stress on land-based aquaculture (especially tilapia, catfish)- Decrease	- Use of salt-tolerant aquaculture species- Integrate recirculating aquaculture systems (RAS)-

Evaporation (inland areas)	water zones for aquaculture	in aquaculture water quality and fish survival rates	Improve water reuse and treatment systems developing climate-resilient aquaculture technologies.
Rising sea level	- Inundation of low-lying fishing ports and hatcheries- Salinization of coastal aquifers	- Damage to infrastructure- Displacement of coastal communities- Decreased access to freshwater for hatcheries	- Establish coastal buffer zones- Relocate critical infrastructure- Enhance coastal monitoring and resilience planning; Protecting Coastlines/ Hard Engineering: Ecosystem-Based Adaptation- Early Warning Systems
Changes in precipitation and water availability	- Increased droughts inland- Runoff leading to sedimentation and pollution in coastal waters	- Impact on feed crop production (barley, soy) for aquaculture- Degraded nearshore ecosystems affecting wild fisheries	- Promote sustainable watershed management- Implement erosion control and reforestation- Support climate-smart agriculture to secure feed. Building flood barriers, diversifying water sources, implementing water-efficient technologies, and restoring wetlands.
Increase in frequency and/or intensity of storms	- Physical damage to aquaculture cages and boats- Habitat destruction (e.g., seagrass beds, rocky reefs)	- High operational costs and risk for aquaculture investors- Reduced nursery and breeding habitat for marine species	- Reinforce aquaculture systems- Develop early warning systems- Introduce insurance schemes for climate risks. strengthening coastal defenses, Introduce insurance schemes for climate risks

5. Are any of the issues raised in table 4 above addressed in the National Environmental Management Policy and Plan and National Agricultural Investment Plan (No)

Issue	State how it is addressed in NEMA (Law No. 15/2003 / Environment Policy)	State how it is addressed in NAIP (Agriculture Investment Policy)	Remarks
Surface water temperature impacts	*Not directly addressed.* No reference to ocean warming or species migration.	*Not addressed.* Focuses on land-based crops and livestock.	Gap exists. Needs marine-specific climate indicators and

			oceanographic monitoring.
Increased salinity and evaporation	*Indirectly addressed.* Mentions water scarcity and pollution control; no mention of saline stress on aquaculture.	*Generally addressed.* Prioritizes water-saving agriculture and irrigation modernization; does not cover salinity risks in fish farming.	Integration with water governance (SECCAR findings) is necessary.
Sea level rise	*Partially addressed.* Law 15 calls for protection of coastal ecosystems and prevention of marine degradation; no specific measures on coastal aquaculture displacement.	*Not addressed.* NAIP lacks coastal vulnerability mapping or sea level adaptation scenarios.	A significant oversight for coastal aquaculture zones.
Water availability and precipitation	*Generally addressed.* Emphasis on water conservation, pollution control, and aquifer protection.	*Explicitly addressed.* Prioritizes irrigation reform, drought resilience, and sustainable agriculture.	Opportunity to build synergy with aquaculture via water reuse and integrated systems.
Storm intensity and damage	*Not explicitly addressed.* Disaster risk reduction is not well integrated in NEMA.	*Not addressed.* NAIP does not include risk management systems for aquaculture or fisheries infrastructure.	Introduce insurance schemes, marine zoning, and risk-proof aquaculture planning.

6. Based on the information and deductions derived above, what is your SWOT analysis of the NAIP on issues pertaining to climate change and environmental management and related policies for the fisheries and aquaculture

(i) NAIPs

Strengths :	Weaknesses
Prioritizes agriculture and food security as strategic sectors. Aligned with national development agendas and investment frameworks. Supported by international cooperation (FAO, EU, GIZ, etc.).	Weak integration of climate change and environmental risks in fisheries and aquaculture. Lacks clear reference to climate-resilient aquaculture practices or coastal ecosystem protection. Poor alignment with national environmental policies and adaptation strategies.

Opportunities Can be revised to align with PFRS and CAADP Fisheries Guidelines. Opportunity to integrate blue economy, water security, and coastal resilience. Technical support available from global partners (e.g., GEF, GCF, FAO).	Threats Intensifying droughts, temperature rise, and water scarcity threatening inland aquaculture. Institutional instability and lack of enforcement. Over-dependence on imports may sideline long-term sustainability goals.

Your general remarks and recommendations if any:

- Update the NAIP to include climate-smart aquaculture and marine biodiversity considerations.
- Strengthen inter-sectoral coordination with environment, water, and climate authorities.
- Include budgeted actions for capacity building, monitoring, and climate risk mitigation in fisheries.

(ii) National fisheries and aquaculture policies and development plans

Strengths Existence of a dedicated National Project of Aquaculture (since 2021). Introduction of regulatory tools (permits, environmental forms, procedures handbook). Alignment with regional initiatives (WestMED, AU-IBAR, GFCM).	Weaknesses: Not yet fully mainstreamed into national climate or disaster risk frameworks. Short-term, underfunded training programs with limited impact. Weak integration of ecosystem-based management and marine spatial planning.
Opportunities Potential to develop national blue economy strategy in coordination with WestMED. Growing interest from youth and private sector in sustainable aquaculture.	Threats Continued marginalization of the fisheries sector in national investment plans. Pollution, overfishing, and illegal fishing affecting marine ecosystems. Lack of resilience to climate shocks (e.g., sea-level rise, extreme weather).

Potential funding via PFRS-aligned regional platforms.	

Your general remarks and recommendations if any

- Formalize a national fisheries strategy that integrates climate and environmental components.
- Scale up long-term training programs and technical research on aquaculture resilience.
- Ensure alignment with the NAIP and national adaptation planning.

(iii) National Environmental Management Policies and Plans

Strengths	Weaknesses
Existence of a legal framework such as Law No. 15 (2003) on environmental protection. Libya is party to international environmental treaties.	Environmental governance is fragmented and under-resourced. Weak enforcement and monitoring of marine and coastal protection laws. No specific focus on environmental management of the fisheries/aquaculture sector.
Opportunities	**Threats:**
Chance to integrate aquaculture and marine resource sustainability into national environmental strategies. Use of digital tools for environmental monitoring and compliance.	Degradation of coastal zones due to unregulated development, pollution, and climate stress. Insufficient coordination between environmental and agricultural authorities.

Your general remarks and recommendations if any

- Strengthen institutional cooperation between the environment and fisheries sectors.
- Update environmental legislation to include marine spatial planning and aquaculture-specific safeguards.
- Build capacity for environmental impact assessments (EIAs) and monitoring in fisheries.

(iv) National Climate Change Action Plan

Strengths	Weaknesses:
Libya ratified the Paris Agreement in 2021.	No submitted NDC or finalized National Adaptation Plan (NAP).

Projects like SECCAR and CASEP are building adaptation capacity. Stakeholder consultations on adaptation planning are ongoing.	Fisheries and aquaculture not explicitly addressed in current plans. Weak institutional architecture for climate governance.
Opportunities: Development of the NAP offers a timely entry point to integrate blue economy. Potential to leverage international climate finance (GCF, Adaptation Fund).	Threats Risk of exclusion of coastal communities and marine sectors in national planning. Lack of data and climate modeling specific to fisheries/aquaculture.

Your general remarks and recommendations if any

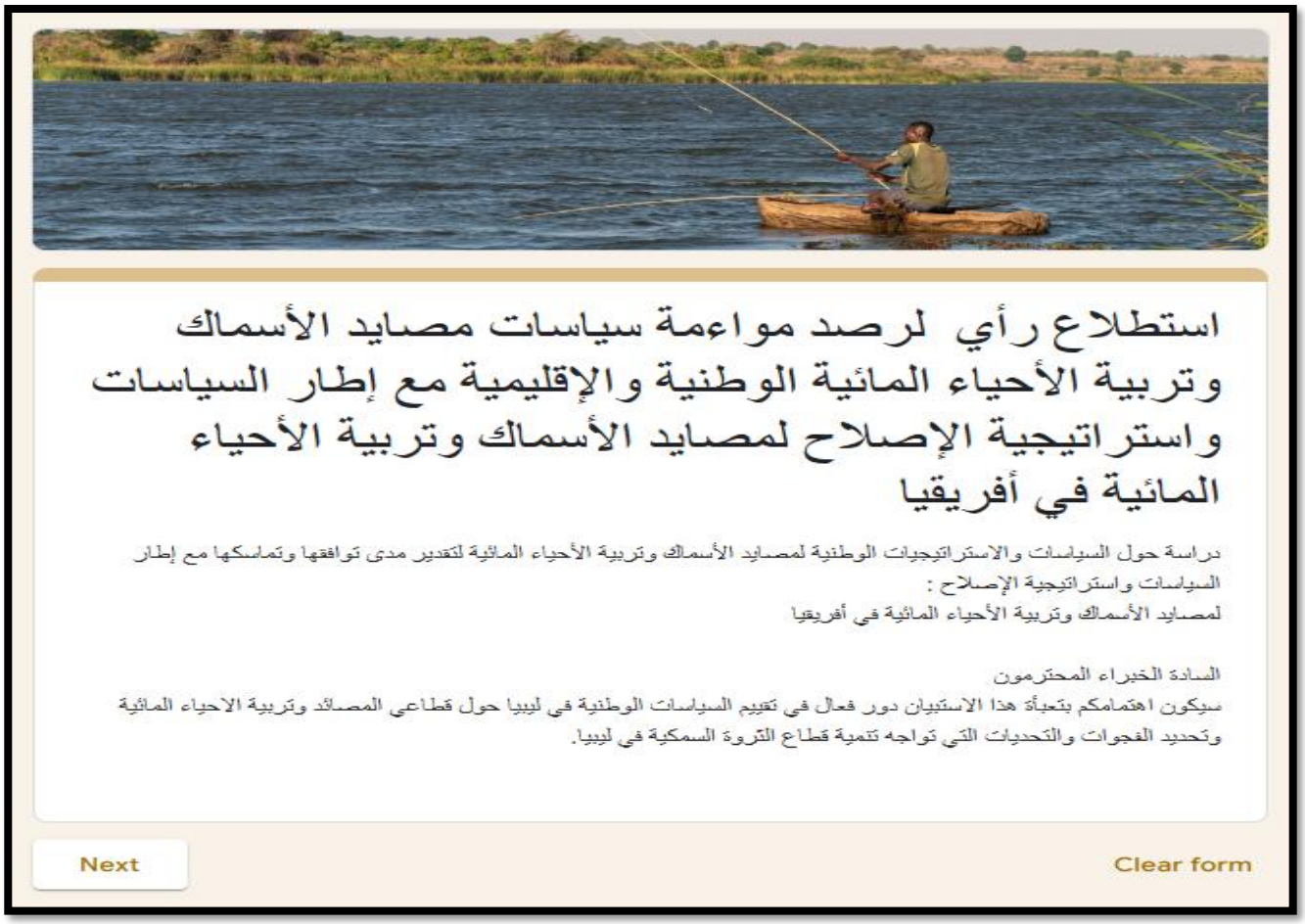
- Ensure that fisheries and aquaculture are recognized in the upcoming NAP as vulnerable sectors.
- Build synergies between the adaptation plan and the NAIP/PFRS frameworks.
- Advocate for targeted research and investments in climate-resilient aquaculture systems.

Appendix (3) KII

Name	Occupation
Saber Al-azzabi	Deputy of Ministry of Marine Wealth
Ali Shagrune	Head of Libyan Maritime Cluster
Hanan Agil	ICO Ministry of Agriculture and Animal Wealth
Mohamed Hamouda	ICO Ministry of Environment

Appendix (4) Online Survey:

https://docs.google.com/forms/d/e/1FAIpQLScPWbusJdS3_4MaW8y9udpDsS45xdZWD18bmoSoMMVa8cTyEQ/viewform



Appendix (5) validation Workshop:

COMMUNIQUE

STAKEHOLDERS CONSULTATION AND VALIDATION WORKSHOP FOR THE:

ALIGNMENT OF NATIONAL FISHERIES AND AQUACULTURE STRATEGIES AND THE NATIONAL AGRICULTURAL INVESTMENT PLANS TO THE POLICY FRAMEWORK AND REFORM STRATEGY FOR FISHERIES AND AQUACULTURE IN AFRICA AND CLIMATE-CHANGE ADAPTATION INCLUDING FORMULATION OF RECOMMENDATIONS FOR DOMESTICATION OF RELEVANT GLOBAL INSTRUMENTS – LIBYA

Prepared by:
Ali Shagrune- High Expert in Fishery and Aquaculture
18-21 June 2025
Tunis

Appendix 1. Stakeholders' Consultative and Validation Workshop:

Name of Participant	Position / Title	Country/Institution	Email
Sara A A Almabruk	Head of the Organization (NGOs)	LIBYA/ Marine Biology in Libya	Sara Almabruk <sara.almabruk@mb.org.ly>
Fatima M Hamad Saeed	International Cooporation Office	Libya/ national Project of Aquaculture	fatima.saeed@omu.edu.ly
Salah Aldeen Ahmed Amjrab	Planning Adminstartion	Libya/National Project of Aquaculture	mejoelmojrab@gmail.com
Feetouri Mohammed Haroun Shoulak	Ain Algahzalla Director	Libya/National Project of Aquaculture	alfytwryharwn3@gmail.com
Noureeyah Shaeban Albakoush	Human Resource and Training Office	Libya/National Project of Aquaculture	noriaalbakosh@gmail.com
Taha Almansori	Ministry of Marine Wealth	DW UNIVERSITY GERMANY	tahaalmnsori@gmail.com
Salah Asem Abuajaja	Ministry of Marine Wealth	LIBYA High SCHOOL Tripoli	salehabuajaja@gmail.om
Ali Omar Hafad	Ministry of Marine Wealth	Sirt Libya University	hafezali1989@gmail.com
ALI Mohamed Shagrune	High Expert & Adviser & Chairman L M C	Croitia Zagreb University	marine.marine.libya@gmail.com
Adel Bakhit Ibarahim	Ports and Maritime Ministry	Tripoli University	adelbak1962@gmail.com
Feras Mohamed Elgabri	Ministry of Marine Wealth	Tripoli University	ferelgabri@@gmail.com
Fatima Ramadan Alamri	Organization NGOS	Tripoli University	ebtisambassem@gmail.com
Siraj IbrahimAbusnina	Libya Marine Cotrol	Tripoli University	esymex_sarl@yahoo.com
Masouah ABD Moahammed	Director Aquaculture National Project LIBYA	Omar Almoktar University	masauda.abuarosha@omu.edu.ly
MOHAMED AYAD BIRFAD	DIRECTOR GENERAL	HIGH SCOOL FOR MARINE SI	MBERFAD@GMAIL.COM
Meriem Bakkay	Ground Facilitator	Ministry of Fisheries - Tunisia	meriembakkaydgpaq@gmail.com
Rafik Nouaili	Fisheries and Aquaculture Resource Management Officer	AU -IBAR	rafik.nouaili@au-ibar.org
Obinna Anozie	Fisheries and Aquaculture Resource Management Expert	AU -IBAR	obinna.anozie@au-ibar.org

Simphrose Ogutu	Administration	AU -IBAR	simphrose.ogutu@au-ibar.org
Kennedy Kingoo	Finance	AU -IBAR	kennedy.kingoo@au-ibar.org