KINGDOM OF MOROCCO

Ministry of Agriculture, Fisheries, Rural Development, Water and Forests
Department of Fisheries

THE BLUE BELT INITIATIVE
STRATEGIC FRAMEWORK
2023-2027

" The changes that must be introduced to curb the repercussions of the climate crisis are well known, and the international community should not keep hesitating but rather move forward and activate tangible solutions with a specific implementation agenda, backed by strong political will to change the worrying path towards which the world is heading.
We are calling for an awakening of the global conscience and for a collective, responsible commitment to tackle climate change in order to ensure a better future for all humankind. "

[Extract from the speech addressed by **His Majesty King Mohammed VI** to the participants at the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-26)].

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FOREWORD

Since the CoP22, the ocean has been clearly recognized as a fundamental element of the climate change issue and could provide major solutions within the global response to the climate crisis that we are trying to build. Not only as an essential regulator of the climate but also as a major source of food supply for humans, the ocean provides us with numerous prospects for greater resilience as well as natural ocean-based solutions.

The Paris Agreement (CoP21) has given momentum to the Ocean-Climate Dialogue, from which it is clear that the preservation, conservation and restoration of marine ecosystems represent an ocean climate solution that is essential to the implementation of greenhouse gas emission reduction plans, as well as to strengthening the capacity of resilience of our planet.

Unfortunately, the vital functions of the ocean as providers of many services (oxygen, food, medicine, transport and energy, etc.), are already under a serious threat which led to the declaration of a "state of emergency for the oceans" at the last United Nations Ocean Summit in July 2022 in Lisbon.

We cannot wait anymore, we must speed up the implementation of concrete actions to reform the way we use the ocean, especially our global seafood production system, and engage a real blue transformation for which we also must find consensus on how to achieve it.

The Marrakech Action Proclamation of CoP22 in 2016 emphasized, "The transition required of our economies to meet the goals of the Paris Agreement provides a positive and substantial opportunity for increased prosperity and sustainable development" highlighting the numerous economic and social opportunities in this necessary transformation. This transformation should be based on innovative mechanisms and solutions that strike a balance between economic growth, inclusive social development and ecological conservation for the protection of essential oceanic functions.

Taking its destiny in hand, Africa has already moved on the path of its blue transformation. In the declaration of First African Summit in Marrakech in 2016, the African Heads of State made a strong commitment to move forward together for the global response to the climate crisis. They called for more coherence in the adaptation strategies, a better mobilization of resources and donors, a multilateral and bilateral partnerships as well as a better non-state actors' involvement, and finally for accelerating the implementation of initiatives, that is already identified or launched at the continental level.

As part of the International Climate Action Agenda, the Blue Belt Initiative is one of the key initiatives led by Morocco and launched at CoP22. This initiative constitutes a major contribution by African countries at a continental level and in coherence with the international action to combat climate change, promote the resilience of marine ecosystems and the seafood production systems.

the Blue Belt Initiative provide a "collaborative platform", an important African instrument in support to national, regional and continental blue and marine strategies, by fostering South-South cooperation and partnerships, and mobilizing all the actors and the essential resources (research, innovation, expertise, state institutions, financial institutions and implementing agencies) for the success of the African Blue transformation.

This Strategic Framework of the Blue Belt initiative is the final product of the synthesis based on the BBI concepts and objectives outlined at the 1st BBI Conference held in Agadir (2019) and following the statement of the "Agadir Declaration".

HE Mr Mohamed SADIKI
Minister of Agriculture, Fisheries, Rural Development, Water and Forests

BACKGROUND

The challenges of protecting our oceans and maintaining a sustainable activity in the fisheries and aquaculture sectors are now becoming more apparent. Whether positive or negative, the evolution of aquatic systems under climate change will have implications for the fisheries sector and ecosystem services, throughout the value chain. Species productivity and growth are already changing with consequences for fishing and farming yields, because of shifts in the distribution of fish, alteration of larval transport, thermal tolerance of farmed fish and shellfish, harmful algal blooms and ocean acidification. Resilience of fishing operations and farming activities is also expected to be affected, whether by short-term events such as extreme weather events or medium to long-term changes, such as lake levels or river flow that could affect the safety and working conditions of fishers and farmers. Food control procedures are already undergoing a major reshaping to protect consumers from potential increase in contaminants and toxin levels resulting from changes in water conditions.

With food security at stake, urgent actions are needed to understand these changes and forecast where they are likely to occur. It is not only urgent to enhance science and innovation with novel cross-sector partnerships, but also to make knowledge and information accessible and relevant everywhere and to everyone. Whether they are fishers, sea-farmers, supply chain professionals, seafood industrials, managers, regulators or policy makers, they are mostly focused on the day-to-day running of their business activities. Creating an environment for building trusting stakeholder relationships and engaging in disruptive innovations in fisheries and aquaculture could be a game changer for the future blue economy. According to the Organization for Economic Cooperation and Development (OECD, 2016) the blue economy is seen as the new economic frontier and its sectors have significant growth potential. But how could these prospects be a reality in the current state of degradation of the Oceans and the marine ecosystems, especially in the context of the accelerating effects of the climate changes, increasing demographic and urban pressure on coastal zones? In particular, sustaining the current state of fish stocks is still a challenge and requires immediate action. According to the recent FAO report on the State of World Fisheries and Aquaculture (FAO, 2022) the percentage of stocks fished at biologically unsustainable levels has been increasing since the late 1970s, from 10 percent in 1974 to 35 percent in 2019. It is clear that despite the many national and international fisheries governance initiatives and strategies, fisheries policies could not stop this degradation and underlying trends. Although there are some localized success stories of well-managed fisheries or stocks that have been able to recover through effective management, many stocks remain mostly unassessed, because of the lack of data and information.

African experience showed that effective political involvement in the fisheries management can contribute to achieve its sustainability, but strengthening regional involvement of the operators in the management process and adopting a regional approach seems to be a key success factors for any fisheries policy.

The objectives to be achieved are now accepted by all, and the actions to be undertaken are also known, but how to achieve these objectives is still being actively debated. We all agree on the need to reduce the fishing pressure on stocks, to establish reserves and marine protected areas for the rehabilitation of habitats and marine flora and fauna, but it is different when it comes to putting these objectives into action and make them acceptable by all the stakeholders.

The challenges are even greater when it comes to tackling climate change, the overall effects of which, although already visible on our oceans, often require mitigation and adaptation measures on a scale particularly complex to implement. Whatever the target species, fisheries or management measures, the key factor remains the implementation and proper application of management measures necessary for sustainability. They are all too often perceived by professionals and fishermen as being contradicted to their economic or social interests, therefore, they are the most difficult to implement. Hence, it is urgent to find solutions that reverse the fisherman's perception of sustainability, which is not only biological but also economic, social and environmental.

By proposing an alternative marine food production system, aquaculture was initially seen as a possible solution for feeding the world regarding the stagnation of the world production of fish capture, and the critical state of many fish stocks by overfishing. It has developed considerably (around 90 million tons per year) in recent years and showed the highest growth rate, but also led to many adverse impacts on the sustainability of the marine ecosystems (health problems or over-exploitation of forage fish species). Aquaculture development is expected to continue and accelerate with the high demand for marine food products, but there is an urgent need to incite sustainable aquaculture approaches with the least direct impact and indirect impacts on the oceans.

The context of climate change makes this approach even more urgent, given the fact that in order to strengthen the resilience to climate change, it is imperative to work for the resilience of oceans, marine ecosystems and more specifically fish stocks. This convergence of environmental, climate and fisheries interests will contribute to the adoption of an ecosystem approach to fisheries, a fundamental approach to the new Blue Belt Initiative proposed by Morocco at the CoP22.

The Blue Belt Initiative (called BBI) is a new instrument in the sustainability of aquaculture and fisheries in the context of climate change and the New Blue Economy. It aims to complement regional and national fishery sector strategies by encouraging the transformation of fisheries and aquaculture operators and stakeholders into sustainable activities which are respectful of the marine environment while transforming the environmental constraints arising from the impacts of climate change into new economic opportunities generating added value, employment and sustainability.

To respond to these challenges the BBI was launched in 2016 by Morocco, on the sidelines of the COP 22 held in Marrakech as a new instrument in the sustainability of fisheries and aquaculture in the context of climate change and the new blue economy. This initiative aims to complement regional and national fishery sector strategies by encouraging the transformation of fisheries and aquaculture operators and stakeholders into sustainable activities respectful of the marine environment while transforming the environmental constraints arising from the impacts of climate change into new economic opportunities generating added value, employment and sustainability. It is also part of the agenda of the United Nations Conference on Climate Change, as well as providing a unifying framework for the emergence of low carbon and low ecological footprint on the ecosystems.

During the conference on the BBI that was organized on February 19, 2019 on the sidelines of the fifth edition of Halieutis in Agadir attended by representatives from 22 countries, including 17 ministers, the BBI declaration was presented and echoed by all representatives, reaffirmed the strategic role of the blue economy and aquaculture in Africa in terms of food, economic growth, jobs and innovation. The declaration has also raised the challenge posed by climate change, as well as its threats to the balance of coastal and marine ecosystems and its impacts on fisheries and aquaculture, that are sources of employment and food security for millions of people on the continent.

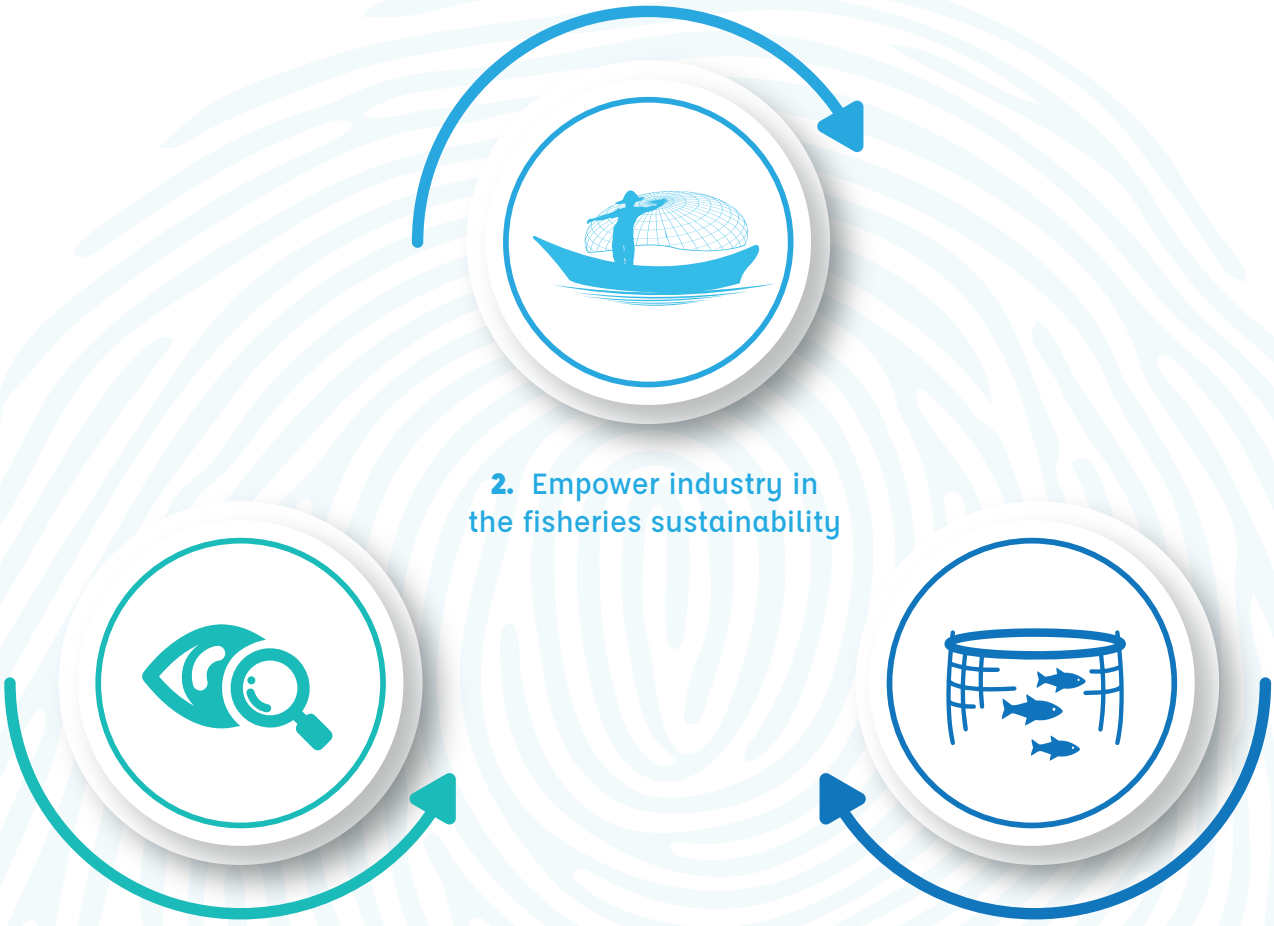
The Agadir Declaration also called for investing in the blue economy, and more specifically in sustainable, innovative and protective fisheries and aquaculture, by facilitating technological and social innovation, the exchange of good practices and the promotion of sustainable development. social entrepreneurship. Such an investment will increase socioeconomic and environmental benefits that will, among other things, create jobs, youth training, food security, eradicate poverty, preserve marine ecosystems and adapt to climate change.

VISION

A resilient ocean and a sustainable seafood production system based on science

PURPOSE

The overarching aim of the Blue Belt Initiative strategy is to provide a **collaborative platform** putting the **users of the oceans at the core of the process** to act together to ensure a resilient ocean, sustainable fisheries sector and a healthy ecosystem all backed by sound science and information. Through this strategy, the Blue Belt Initiative will :



THE TARGET AREA

Coastal areas and Exclusive Economic Zones concentrate the bulk of the biodiversity of the marine ecosystems and the main fisheries and aquaculture activities. Those areas are contributing to up to 85% of world catches.

On the other hand, as the most impacted and sensitive to direct anthropogenic activities and effects, and particularly from climate change, they require extremely urgent attention.

Whether adaptation or mitigation to climate change, actions under the Blue Belt Initiative will focus mainly on this part of the ocean and more specifically on African coastal areas.

KEY STRATEGIC GOALS

STRATEGIC GOAL 1 : SUSTAIN LONG-TERM, HIGH QUALITY COASTAL AND OCEAN OBSERVATIONS

Ocean observations are the key foundation for our understanding of ocean processes variability and changes which have profound implications for ecosystem health, sustainable fisheries, economic growth, and the future state of our planet in a changing climate.

The Blue Belt Initiative will support strengthening human and technological capacities of the coastal ocean observing in Africa through the acquisition and deployment of continuous observing instruments, as well as knowledge transfer, training and exchange of expertise for the maintenance and operation of these systems. The acquisition of oceanographic research vessels, scientific equipment, continuous observations such as oceanographic and meteorological buoys, and many other types of observations such as biotelemetry, underwater autonomous vehicles such as gliders, should be encouraged and supported to monitor coastal ecosystems.

Sustained observations of ocean, coastal systems are critical for Africa's economy and security. African regional networks of observations will provide tailored products and information, and support the local fisheries sector's ability to better manage and protect the living marine resources. This goal also supports the African countries commitment to the United Nations Decade of Ocean Science for Sustainable Development by generating data, information, and knowledge for a comprehensive understanding of the ocean.

Coastal observing systems provide vital data to support safe and profitable fishing, farming and many other activities of the Blue Economy. The Blue Belt Initiative will foster and facilitate collaboration and leveraging of resources to promote efficiencies, cost savings, and increased return on investment.

The Blue Belt Initiative will also support fishing vessel-based observations or the concept of "Observer-User" that can host and deploy an assortment of oceanographic instrumentation; and, the fact that many fishing gear types go down and up through the water column presents a unique subsurface data collection opportunity. This opportunity can complement ocean observing by enabling the cost-effective collection of vast amounts of subsurface ocean information in data-sparse regions. The Blue Belt Initiative's ultimate goal is to foster collaborative fishing vessel-based observations, democratize ocean observation, improve ocean predictions and forecasts, promote sustainable fishing, and power the data-driven new blue economy.

Objective 1.1

Provide common platforms to sustain and operate local and regional research surveys and observing networks composed of multidisciplinary observations from a variety of technologies.

Objective 1.2

Improve coverage of observations (subsurface) by collaborating with fishing fleets and sea farming communities to develop a sentinel fishery based on observations to fill critical gaps and address high-priority needs.

Objective 1.3

Create and maintain data assembly centers and strengthen data stewardship to improve data quality, access, attribution, exchange, delivery, and storage through collaboration and partnerships.

Objective 1.4

Develop and sustain research and models and model-based products, decision support and visualization products to address end-users and stakeholders needs to inform decision making.

STRATEGIC GOAL 2 : EMPOWER INDUSTRY IN THE FISHERIES SUSTAINABILITY ACHIEVING CLIMATE AND ECONOMIC RESILIENCY

Warming waters, changing currents and productivity, and the frequency, and magnitude of impacts are expected to increase. These conditions are disrupting fisheries, fishing communities, and seafood economics as the geographic ranges of fish stocks expand, contract, and the productivity of fish becomes less predictable. There is much at stake, and action is needed now to enable integrated modeling and decision support needed to deliver the climate information to reduce risks and increase resilience.

The opportunity now will be to strengthen our science and information to integrate climate change considerations into fisheries management. Promoting responsible and sustainable industry growth, strengthening supply chains, and ensuring participation of all stakeholders will be a key factor to building resilience to fishery and seafood industries. Deterring and combating the threat of Illegal fishing will help to achieve the sustainability goals.

Objective 2.1

FISH LESS AND BETTER

Develop and extend the smart fishing approach and develop the fishing vessel of the future including promoting ecological certification.

Objective 2.2

PRODUCE MORE AND GET MORE PROFIT FROM LESS FISH

Support local fish processing and valorization development and support biotechnology and R&D solutions for zero waste in the fish transformation industry.

Objective 2.3

ADVANCE CLIMATE SCIENCE AND ECOSYSTEM-BASED APPROACHES

Apply science and observations to understand and address the environmental effects of climate change on the marine living resources and their habitat to increase the sustainability of fisheries

Objective 2.4

PROTECT AND RESTORE OCEAN

Support effective instauration of Marine Protected Area and support the monitoring of marine pollution

Objective 2.5

DEVELOP WORKFORCE SKILLS FOR THE FUTURE

Increase skills and competency in emerging technologies, data literacy through training.

STRATEGIC GOAL 3 : PROMOTE AND SUPPORT SUSTAINABLE AQUACULTURE PRACTICES AND CONTRIBUTE TO THE MITIGATION OF CLIMATE CHANGE

As we face the impacts of climate change, and the fragility of the food supply chains, we need to plan for a future that centers around sustainability and resilience. To ensure resilient ecosystems, seafood access, we must invest in and enable a robust aquaculture industry. Seafood, both wild and farmed, is vital to people, economy, and planet. Aquaculture is a key component of our seafood systems and is one of the most climate-friendly and resource efficient ways to achieve food security, economic, and environmental restoration outcomes.

The cultivation of microalgae and microalgae for example is a very important development potential. In recent years, there have been many hopes of demonstrating their potential as a basis for various industries and markets. Microalgae are used as a complement to fishmeal and fish oil in fish feed and they are also a rich source of protein and lipid especially Omega 3 (DHA & EPA). The production of micro-algae could be a solution to reduce fisheries pressure on small pelagic stocks that are mostly used to produce fishmeal and to the emergence and development of new ecofriendly and sustainable aquaculture.

The development and intensification of aquaculture has always generated major environmental concerns. Health and pollution risks are real. It is in this context that the development of Integrated Multi-trophic Aquaculture is promoted, based on the principle of circular economy, where the waste of one compartment constitutes the food of another, thus producing the least amount of waste possible and contributing to the sustainable development of Aquaculture.

Objective 3.1

DEVELOP LARGE-SCALE ALGACULTURES

Develop and extend techniques and diversity of macro-algaculture on open waters, develop controlled reproduction (sporulation) techniques of seaweed, and support the development of land-based marine microalgae farming

Objective 3.2

DEVELOP AND EXTEND SHELLFISH FARMING

Support new techniques and species of shellfish farming, support development of local production of shellfish seed, and support the development of sanitary and environmental monitoring.

Objective 3.3

DEVELOP OFFSHORE MULTI-TROPHIC AQUACULTURE

Experiment pilot offshore fish farm in Atlantic, develop a new cost-effective design of an offshore cage prototype, and support scaling-up sustainable offshore fish farming in a multitrophic approach.

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