

Gap Analysis

Port Activities/Transport and Trade in Lebanon's Blue Economy

Current State

Lebanon's maritime gateways include the ports of Beirut and Tripoli and the several petroleum terminals and industrial harbors. They serve as pivotal anchors for the nation's economic vitality, enabling a flow of trade and logistics that underpins various sectors of the economy. In the wake of the 2020 explosion at the Port of Beirut, there has been a discernible shift toward rehabilitating and expanding the infrastructure, highlighting the ports' critical role in national recovery and economic stabilization. However, these ports are grappling with systemic issues that compromise their efficiency and potential. Operational inefficiencies, such as delays in cargo handling and logistical bottlenecks, are symptomatic of deeper governance challenges. These challenges are compounded by environmental concerns, with ports contributing to coastal pollution and facing the impacts of inadequate waste management practices.

Desired State

The vision for Lebanon's ports is to transform them into modern, efficient, and sustainable hubs that facilitate international trade while driving economic growth. This entails establishing governance and regulatory frameworks that are robust, transparent, and compliant with international standards, ensuring that the ports operate as commercial centers and as stewards of environmental sustainability. To achieve this, the ports must integrate green initiatives, such as reducing emissions, managing waste effectively, and safeguarding marine biodiversity. These efforts should align with global best practices, positioning Lebanon's ports as leaders in sustainable maritime operations.

Gaps

A significant gap lies in the underinvestment in modernizing the port infrastructure and technology. Lebanon's ports need to adopt cutting-edge technologies and automation to enhance operational efficiency and meet the escalating standards of global trade and security. Furthermore, governance issues, marked by duplication of responsibilities, mismanagement, and corruption, erode the operational efficiency and trust in port authorities. This undermines the ports' ability to attract international partnerships and investments, essential for their growth and modernization. On the environmental front, existing policies and practices are outdated and insufficient to address the current challenges. The ports contribute to coastal and marine pollution, necessitating a comprehensive overhaul of environmental policies to mitigate the impact on Lebanon's marine ecosystems. Below is a structured table that outlines potential regulatory gaps and the necessary actions to be implemented:

Area of Focus	Regulatory Gap	Needed Regulation or Action
Port Management and Operations	Lack of comprehensive legal framework governing port operations.	Implement laws that standardize port operations, management practices, and service quality.
Environmental Protection	Insufficient regulations on pollution control and waste management in port areas.	Enact and enforce strict environmental regulations related to waste disposal, emissions, and spill response in maritime zones. Adopt the National Oil Spill Rescue Law to establish protocols and responsibilities for oil spill management.
Safety and Security	Inadequate safety protocols and emergency response mechanisms in port facilities.	Develop and implement rigorous safety and security standards, including emergency response plans for accidents or disasters. Establish the Joint Search and Rescue Committee to coordinate emergency responses and rescue operations.
Infrastructure Development	Lack of guidelines for sustainable infrastructure development inside and outside port areas.	Create regulations that promote sustainable infrastructure development, ensuring that new projects comply with environmental and social standards.
Maritime Traffic Management	Ineffective regulations on vessel traffic and harbor activities, leading to congestion and inefficiencies. Not enough traffic controllers.	Update and enforce maritime traffic management regulations and infrastructure to streamline vessel movements and reduce port congestion. Open vacancies to employ more traffic controllers.
Technology and Innovation	Limited legal incentives for adopting new technologies and innovative practices in port operations.	Introduce policies that encourage technological innovation in port operations, including automation and digitalization incentives.
International Compliance	Non-alignment with international maritime conventions and standards.	Harmonize national laws with international maritime conventions, ensuring compliance with global standards and practices. Implement the International Ship and Port Facility Security (ISPS) Code to enhance maritime security.
Conventions Ratification	Non-ratification of some international conventions creates gaps in addressing crises	Urgent ratification of these conventions is necessary to strengthen Lebanon's legal framework, enhance maritime safety, protect the environment, and ensure effective accident response.
Disaster Risk Reduction (DRR)	Inadequate disaster preparedness and risk reduction measures in port areas.	Enact a Disaster Risk Reduction (DRR) law specifically tailored for ports to improve resilience and safety.

Area of Focus	Regulatory Gap	Needed Regulation or Action
Quality, Health, Safety, and Environment (QHSE)	Lack of standardized QHSE practices across all ports.	Mandate the establishment of QHSE units at all ports to ensure consistent and high-quality safety standards.
Legal and Judicial Training	Insufficient expertise in maritime law among legal professionals and judiciary.	Develop training programs for lawyers and judges specializing in maritime law to improve legal proceedings and enforcement in the maritime sector.

Strategies for Improvement

To bridge these gaps, there should first be a significant investment increase to upgrade the port infrastructure, incorporating advanced technology and automation. This will streamline operations, enhance security, and improve environmental management. Second, governance reforms are imperative to tackle the root causes of inefficiency and corruption. These reforms should aim at improving management practices, enhancing transparency, and aligning the ports' operations with international standards and best practices. Lastly, environmental policies need thorough revision and enforcement. Adopting green port initiatives, such as reducing emissions, implementing waste management protocols, and promoting sustainable maritime practices, will be critical. These measures should aim at minimizing pollution, protecting marine life, and ensuring the long-term ecological health of Lebanon's coastal and marine environments. By addressing these gaps with targeted strategies, Lebanon can revitalize its port sector, fostering a sustainable and prosperous maritime trade environment that contributes to the broader objectives of the national Blue Economy.

Marine Living Resources/Seafood in Lebanon's Blue Economy

Current State

The Marine Living Resources/Seafood sector is a pillar of local economies across Lebanon's coastal regions, providing essential employment and contributing partly to national food security. However, the sector is besieged by challenges that jeopardize its future. Overfishing and illegal fishing practices, driven by outdated practices and the absence of comprehensive management plans, is depleting fish stocks at an alarming rate. Coupled with unsustainable practices, this overexploitation is leading to severe environmental degradation and biodiversity loss, undermining the sector's long-term sustainability. Moreover, inefficiencies plague the entire value chain from catch to market, impacting the quality of seafood products and diminishing their profitability. This inefficiency is attributed to outdated infrastructure, lack of technological integration, and the absence of streamlined processes for distribution and marketing.

Desired State

The envisioned future for this sector is one where sustainable management of marine resources prevails, ensuring their long-term viability and bolstering economic growth. This entails adopting best practices in fishing and aquaculture, thereby enhancing productivity and sustainability while minimizing environmental impacts. Key to this vision is establishing a robust value chain that supports efficient distribution, processing, and marketing of seafood products, ensuring that they reach markets in optimal condition and fetch fair prices, thus benefiting the entire ecosystem from fishers to consumers.

Gaps

The sustainability of current fishing practices is a pressing concern, with existing methods leading to resource depletion and significant biodiversity loss. There's a stark lack of infrastructure and technology that supports efficient and sustainable aquaculture, hindering the sector's ability to modernize and grow sustainably. Furthermore, the regulatory frameworks in place are inadequate for effectively managing fishing practices and safeguarding marine biodiversity, resulting in unchecked exploitation and environmental damage. Below is a structured table that outlines potential regulatory gaps and the necessary actions to be implemented:

Area of Focus	Regulatory Gap	Needed Regulation or Action
Governance and Coordination	Complexity in the plurality of responsibilities among different ministries.	Simplify governance structures to clearly define responsibilities; streamline licensing processes to a single authority or establish a unified regulatory body for the fishing sector.
Investment in the Sector	Lack of targeted investment initiatives.	Strengthen the role of the Ministry of Economy and Trade (MoET) through IDAL to increase investment in the fisheries sector.
Integrated Coastal Zone Management (ICZM)	Absence of a comprehensive ICZM framework.	Adopt and implement the Integrated Coastal Zone Management (ICZM) strategy and law to ensure sustainable coastal development and management.
Fisheries Legislation	Outdated or missing fishing laws and regulations.	Pass the new fishing law to modernize the regulatory framework, ensuring sustainable exploitation of fishery resources.
Marine Protected Areas (MPA)	Slow progress in establishing and operationalizing MPAs.	Accelerate the declaration of all MPAs listed in the 2012 Strategy as protected areas within an MPA Network approach. Pass the MPA laws quickly and declare the MPA network.
Wastewater Treatment	Delay in establishing coastal wastewater treatment plants (WWTPs).	Expedite the development and commissioning of coastal WWTPs to prevent untreated sewage from reaching the sea, thus protecting marine life and water quality.

Area of Focus	Regulatory Gap	Needed Regulation or Action
Sustainable Fishing Practices	Lack of comprehensive laws to prevent overfishing and illegal fishing practices.	Implement and enforce strict quotas and monitoring systems to manage fish stocks sustainably. Control illegal practices.
Marine Biodiversity Protection	Insufficient legal measures to protect marine biodiversity.	Enact laws to establish and MPAs, and regulate activities that harm marine ecosystems. Declare no-take zones.
Technology and Innovation	Limited legal support for technological advancement in fisheries.	Promote policies that encourage the adoption of advanced technologies in fishing.
Market and Trade Regulations	Lack of standards and regulations for seafood quality and trade.	Introduce regulations to ensure the quality, traceability, and sustainable trade of seafood products.
Education and Training	Limited legal frameworks for education and capacity building in the marine sector.	Develop regulations that mandate training and education programs for sustainable fishing and boat mastery conducts.

Strategies for Improvement

To bridge the gaps and move towards a more sustainable and productive future in the Marine Living Resources and Seafood sector, Lebanon needs to focus on several pivotal strategies. First, the promotion of Sustainable Fishing Practices is essential. Implementing strict quotas and establishing robust monitoring systems are crucial to preventing overfishing and illegal fishing practices. This effort should be supported by adopting scientifically informed management plans that ensure the long-term health and sustainability of fish stocks. Second, there is a significant need for investment in modern fleets, port infrastructure, and Technology. The sector's sustainability and productivity hinge on substantial investments in modern facilities and technologies. Third, the Enhancement of Regulatory Frameworks is imperative. Strengthening the laws and regulations that govern the fishing industry is essential to enforce sustainable practices and protect marine ecosystems. This strategic focus should include creating and enforcing MPAs, creating no-take zones, regulating fishing gear and methods, and ensuring compliance with international conservation standards. By adopting these strategies, Lebanon can pave the way for the sustainable development of its Marine Living Resources/Seafood sector. This approach will not only contribute to the preservation of marine ecosystems but also support local economies and ensure food security for future generations.

Coastal Tourism/Tourism and Recreation in Lebanon's Blue Economy

Current State

In Lebanon, the tourism sector stands as a cornerstone of the economy, yet it faces challenges that limit its potential. Tourism's economic contributions are significant but are predominantly concentrated in certain areas, leading to seasonal fluctuations and localized pressures on resources

and communities. Environmental impacts are a growing concern, with insufficient infrastructure exacerbating the situation, often detracting from the overall tourism experience and threatening the sector's sustainability. Furthermore, Lebanon's rich potential for cultural and eco-tourism remains largely untapped, representing a missed opportunity to diversify and enrich its tourism offerings.

Desired State

The aspiration for Lebanon's tourism sector is to evolve into a diversified and sustainable industry that harmonizes economic benefits with environmental and cultural conservation. Achieving this requires high-quality infrastructure and services that not only enhance the visitor experience but also advocate for and implement sustainable practices. Integral to this vision is the development of eco-tourism and cultural heritage tourism, positioning these as central components of Lebanon's tourism sector. Such an approach aims to provide immersive, educational, and environmentally respectful experiences that celebrate Lebanon's unique natural and cultural assets.

Gaps

The development trajectory of Lebanon's tourism has been less than sustainable, frequently leading to environmental and cultural degradation. The infrastructure and services currently in place are inadequate to support a high-quality, year-round tourism experience, often failing to meet the needs of a diverse tourist demographic. Additionally, there is a notable deficiency in the promotion and development of alternative tourism forms, such as eco-tourism and cultural tourism, which are essential for diversifying the sector and enhancing its appeal to a broader audience. Below is a structured table that outlines potential regulatory gaps and the necessary actions to be implemented:

Area of Focus	Regulatory Gap	Needed Regulation or Action
Sustainable Tourism Practices	Lack of comprehensive regulations to ensure sustainability in tourism.	Enact and enforce laws that mandate sustainable practices in tourism, including guidelines for environmental preservation and cultural heritage protection.
Infrastructure Development	Insufficient standards for tourism infrastructure and services.	Develop and implement regulations that establish high-quality standards for tourism infrastructure and services to support year-round activities.
Eco-Tourism and Cultural Tourism	Absence of specific legal frameworks promoting eco-tourism and cultural tourism.	Create policies and regulations that support the development and marketing of eco-tourism and cultural tourism, ensuring these practices are sustainable and educational.
Environmental Impact	Inadequate regulations on the environmental impact of tourism activities.	Introduce stringent environmental impact assessment requirements for tourism projects to minimize negative effects on ecosystems and communities.

Area of Focus	Regulatory Gap	Needed Regulation or Action
Encroachments of the coastline	Current laws inadequately protect the Maritime Public Domain (MPD)	Amending Law 64/2017 to restrict occupation rights of the MPD exclusively to the Lebanese State, ensuring it serves only the public interest.
Investment and Economic Development	Limited investment initiatives in the tourism sector.	Strengthen the role of the MoET through IDAL to increase investment in the tourism sector.
Recreational Fishing Law	No legal framework for recreational/touristic fishing.	Draft specific laws for managing recreational and touristic fishing to ensure sustainable practices and resource conservation.
Institutional Framework for Blue Economy	Absence of a dedicated entity for Blue Economy oversight.	Establish a Blue Economy Council to centralize efforts, promote sustainable practices, and ensure sectoral growth and coordination.
Maritime Spatial Planning	Lack of integrated planning for maritime and coastal activities.	Adopt Maritime Spatial Planning to manage the use of marine and coastal spaces sustainably and cohesively.
Sustainability Certification	No standardized sustainability recognition for local products and activities.	Create a specific Blue Label for products and activities (like sea salt, local fish, scuba diving, jet skiing) that adhere to sustainability criteria.
Recreational Infrastructure Development	Inadequate facilities for eco-friendly recreational activities.	Develop a Lebanese coastal trail for biking and hiking to promote eco-tourism and implement boat taxis between harbors to enhance marine tourism and reduce pollution.

Strategies for Improvement

To bridge these gaps in a sustainable and thriving tourism sector, Lebanon needs to embrace a comprehensive strategy. The first step involves the implementation of sustainable tourism practices. This effort should focus on minimizing the environmental impact of tourism activities while promoting the preservation of cultural heritage. It is essential to integrate sustainable practices into the planning and operation of tourism services, ensuring that these initiatives contribute positively to local communities and ecosystems. Moreover, there is a critical need for investment in infrastructure improvements. Developing robust infrastructure capable of supporting a diverse array of tourism activities throughout the year is paramount. This development is not limited to physical enhancements, such as transportation, accommodation, and visitor facilities, but also extends to soft infrastructure, including the training of service providers to guarantee the quality and sustainability of tourism services. Additionally, the development and marketing of eco-tourism and cultural tourism are vital for diversifying Lebanon's tourism sector and attracting new visitor segments. Investing in these areas requires creating experiences that allow tourists to interact with the natural environment

and cultural heritage in ways that are respectful, educational, and sustainable. By pursuing these strategies, Lebanon can forge a tourism sector that is not only economically advantageous but also environmentally sustainable and culturally vibrant. This approach will ensure the long-term viability and allure of Lebanon's coastal and recreational tourism, making it a model for sustainable tourism development.

Barriers to Achievement

The challenges undermining Lebanon's blue economy are complex and they are deeply rooted in historical exploitation and contemporary practices. Historically, marine ecosystems in Lebanon, much like in other parts of the world, were treated as inexhaustible resources, open for unrestricted use and disposal of waste. This perception has led to a reality where these ecosystems are under severe strain, far from being limitless. The coastal and marine environments of Lebanon are now facing the pressures of overutilization by various sectors, including port activities, marine living resources exploitation, and coastal tourism, all compounded by the growing impacts of climate change. This scenario has ushered in a period of inefficiently regulated competition among users, leading to over-exploitation and, in some instances, causing irreversible damage to the aquatic resources and coastal areas that are vital for the nation's socio-economic well-being.

Concerning marine living resources, Lebanon faces the critical challenge of overfishing, driven by technological advancements that enable more efficient fish extraction, coupled with poorly managed access to fish stocks and rising demand for seafood. This issue is exacerbated by Illegal, Unreported, and Unregulated (IUU) fishing activities, which inflict significant economic and environmental damage, undermining the sustainability of marine biodiversity and the livelihoods dependent on it. The coastal tourism sector is grappling with habitat degradation due to coastal development, encroachment on public lands, deforestation, mining activities, and unsustainable fishing practices. Pollution from untreated sewage, agricultural run-off, and marine debris, including plastics, further exacerbates this degradation, leading to the destruction of infrastructure and livelihoods. These environmental impacts not only detract from the quality of the tourism experience but also threaten the long-term viability of the tourism sector.

Climate change poses an overarching threat, with phenomena such as sea level rise, increased sea temperatures, and more intense and frequent weather events disrupting marine ecosystems. These changes have profound implications for marine life and habitats, affecting both the marine living resources and coastal tourism sectors. The uncertainty surrounding the long-term impacts of climate change on ocean systems adds a layer of complexity to the challenge of sustainably managing these vital resources. Unfair trade practices and ad-hoc development contribute to the challenges faced by Lebanon's blue economy. These practices often result in externalities between sectors, leading to suboptimal siting of infrastructure, overlapping land and marine area uses, marginalization of vulnerable communities, and loss or degradation of critical habitats. Such development patterns undermine the efforts in one sector by causing negative spillovers into others, exemplified by how unregulated tourism development or ill-suited infrastructure projects can negate the benefits of coastal zone management or conservation efforts.

Furthermore, anthropogenic interventions like coastal erosion, sand accumulation, illegal mining, and construction activities, including breakwaters, have altered the natural state of coastal and marine environments, leading to further degradation. Only 42% of the Lebanese coast remains accessible to all. Socio-economic challenges such as fluctuating employment trends in blue economy sectors, gender and social inclusion issues, erosion of traditional knowledge, and significant gaps in necessary infrastructure and investment further compound the problem, necessitating a holistic and integrated approach to address these multifaceted issues. To effectively counter these challenges and capitalize on the opportunities for sustainable development, Lebanon needs to adopt a systematic and comprehensive strategy. This strategy should be grounded in a thorough understanding of nationally defined priorities, social context, and the available resource base. Integrated coastal zone management stands out as a critical approach to safeguarding coastal and nearshore resources while optimizing their use for economic activities. Accurately assessing the value of marine resources and leveraging new data can inform decision-making processes, driving the transition towards a sustainable blue economy.

Innovative solutions, technological advancements, and nature-based approaches are essential to address the environmental and socio-economic challenges head-on. Sustainable tourism development, coupled with strategies for economic resilience and adaptation, can create a balanced pathway for growth that respects both ecological boundaries and community needs. Financing opportunities that focus on improved governance will pave the way for investable projects, enhancing the blue economy's contribution to national and local economies and safeguarding these resources for future generations. By aligning natural capital with investment capital through responsible finance and governance, and by harnessing science, data, and technology to underpin governance reforms and shape effective management decisions, Lebanon can cultivate a blue economy that is not only robust and sustainable but also inclusive and adaptable to future environmental and economic challenges.