



Lebanon

Integrated Coastal Zone Management Strategy

Summary



2.1
Mediterranean
Coastal Zones Climate
Resilience Water Security
and Habitat Protection



SCCF
Enhancing regional
climate change adaptation
in the Mediterranean Marine
and Coastal Areas



UN
environment
programme



Mediterranean
Action Plan
Barcelona
Convention



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Introduction

Lebanon’s Coast Matters: Shaping the Way Forward

Lebanon’s coast is a unique and treasured space—rich in natural beauty, cultural heritage, and opportunities for all its people and communities. Over the past decades, however, it has come under extreme pressures from rapid urbanization, pollution, and climate change, making its protection and sustainable management more important than ever.

At the heart of this project is the update of Lebanon’s National Integrated Coastal Zone Management (ICZM) Strategy and the development of a comprehensive ICZM Law—an important step toward better protecting and managing this shared resource. Building on past efforts and lessons learned, this overview shows how Lebanon is moving toward a more integrated approach that connects land and sea, strengthens coordination between institutions, and balances development with environmental protection and public access.

By highlighting key priorities, actions, and opportunities for collaboration, this initiative aims to inform and inspire everyone—from government institutions to experts and local communities—to take part in shaping a more resilient, inclusive, and sustainable future for Lebanon’s coast.

Why is the ICZM Strategy important?

- Nearly 60% of Lebanon’s population lives on the coast
- 80% of the coastline is built up or privatized
- Only 40 km of natural shoreline remain publicly accessible
- Climate change, pollution and unregulated development are putting coastal ecosystems and livelihoods at risk.

An insight into Lebanon’s Coast: A Hidden Treasure Worth Protecting

Geography & Natural Features

- ~240 km coastline from Naqoura (South) to Al-Arida (North)
- Mostly rocky shores with some sandy beaches
- Continental shelf sloping to 100–200 m depth
 - Up to 18 km wide in the North, around 7 km in the South
 - A Deep-Sea drop from 100 m to 1,500 m between Beirut and Anfeh
- 40 rivers and streams, 16 perennials with year-round flow
- 15 coastal rivers delivering freshwater, sediments and nutrients to the sea

Cultural & Ecological Sites

Fifteen sensitive sites identified as high priority sites for conservation:

- 4 common cultural and ecological sites (e.g., El Kelb River, Aadloun beach and caves)
- 3 cultural heritage sites (e.g., Batroun Historic Harbor, Saida Sea Castle)
- 8 ecological sites (e.g., Jbeil, Amshit beaches)

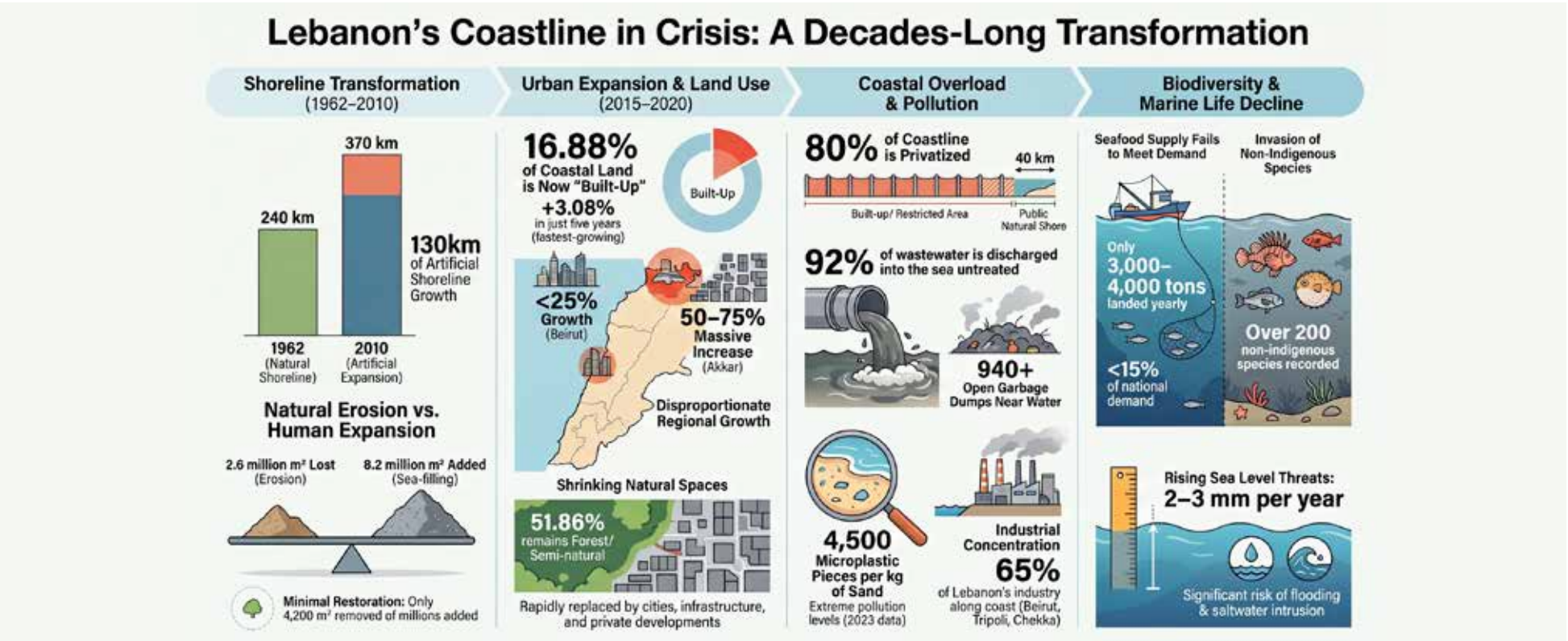
Biodiversity & Natural Heritage

- ~1,600 marine species recorded along the Lebanese coast (Macrophytes, Plankton, Benthos, Fish, Mammals, Reptiles, Birds)
- ~18% of global described marine species found in the Mediterranean
- 3 Marine Protected Areas MPAs:
 - Palm Island Nature Reserve (PINR);
 - Tyre Coast Nature Reserve (TCNR);
 - Abbassieh Coast Nature Reserve (ACNR).
- 4 artificial reef sites:
 - Al-Aabdeh (North Lebanon)
 - El Zireh Underwater Garden (Saida)
 - Jounieh Bay Reef Garden (Mount Lebanon)
 - AR2020 Al-Berbara Reef (Mount Lebanon)

People & Coastal Use

- Nearly 60% of Lebanon’s population lives along the coastal strip
- 44 fishing ports and landing sites
- 4 commercial ports : Beirut, Tripoli, Sidon (Saida), Tyre





Lebanon's Coast, Ownership, and Access: Citizen's Rights

1925 — Decision No. 144/S	1966 — Decree No. 4809 & 4810	2019 — Law No. 130
- Beaches and the shoreline are part of the maritime public domain (public property). - Includes all areas up to the highest winter waterline.	- Gives us the right to the coast, as a shared space, and that planning should serve our communities. - Ensures that any projects along the coast let everyone continue to enjoy and access the shore.	Protects the coast you love by creating safe zones for nature and people to enjoy.

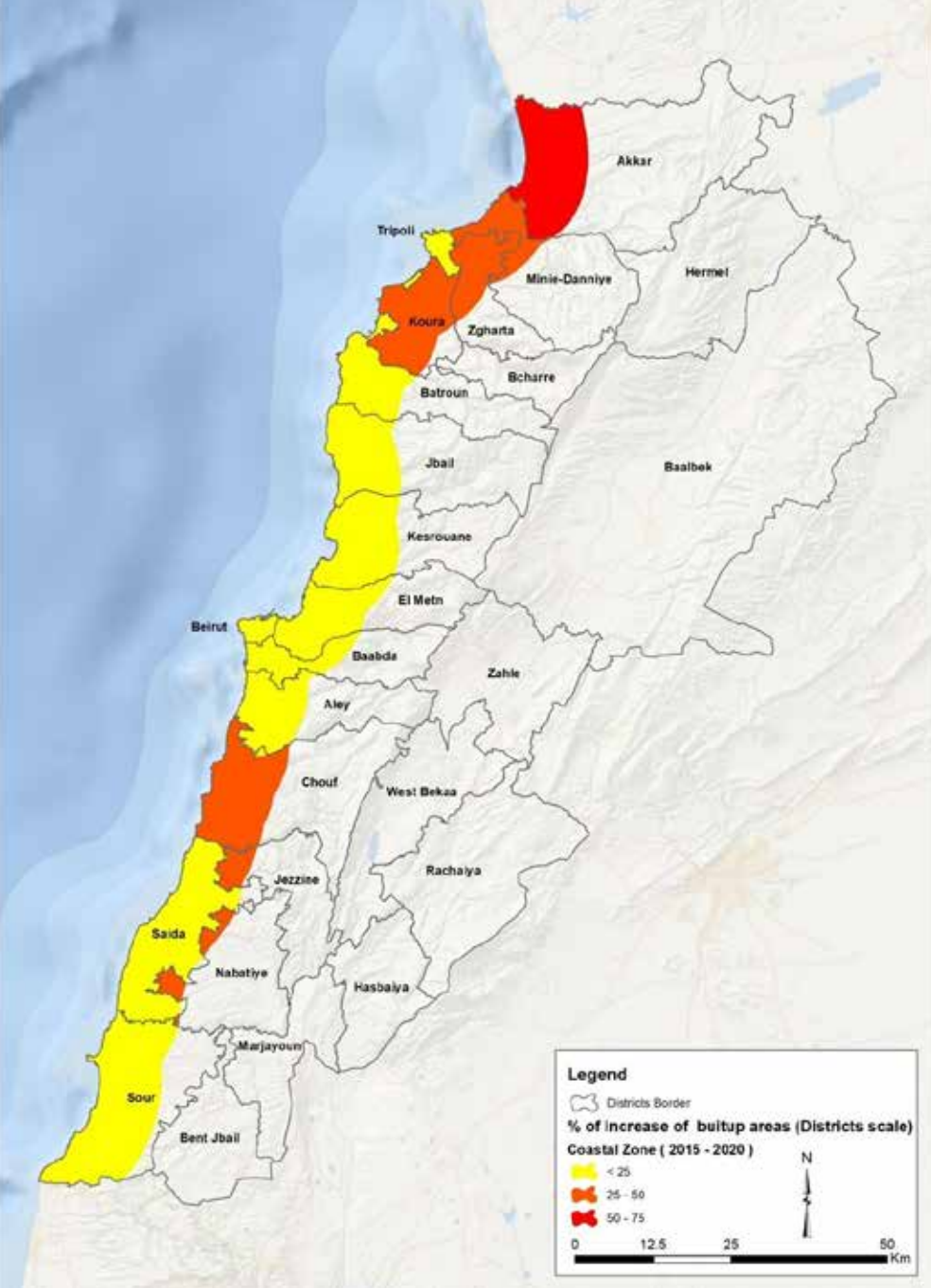


Figure 1.
How Lebanon's coastline is changing: This map highlights the growth of built-up areas across coastal districts, showing where urban expansion is on the rise.
(Source: ©S. Termos, 2023)



Lebanon's Coast: Pathway Towards ICZM

ICZM Protocol for the Mediterranean

- **Integrated Coastal Zone Management Protocol for the Mediterranean (ICZM) – a Regional Commitment** - Lebanon ascended the 2008 ICZM Protocol in **31/08/2017**.
- **Plans land and sea together** for sustainable coastal development
- **Protecting nature and biodiversity** through ecosystem-based approaches
- **Keeping coastal landscapes open and public**
- **Managing risks like** erosion and climate change
- **Sharing knowledge and working with other Mediterranean countries**

By following the Protocol, Lebanon brings its coastal policies in line with regional best practices while adapting them to local needs.

As per Article 2 of the Protocol, ICZM is defined as: “Integrated coastal zone management” means a dynamic process for the sustainable management and use of coastal zones, taking into account at the same time the fragility of coastal



ecosystems and landscapes, the diversity of activities and uses, their interactions, the maritime orientation of certain activities and uses and their impact on both the marine and land parts.”

Better Protection for Lebanon's Coast Starts Now: A New Law

- **The new ICZM draft Law of 2026 includes 10 Parts, 14 Chapters, and 76 Articles:**
 - **Sets national goals, planning tools, and governance bodies**
 - **Protects** the Maritime Public Domain, **regulates** land use, and **safeguards** ecosystems, heritage, and public access
 - **Introduces** monitoring systems, environmental assessments, and financing tools
 - **Addresses** climate risks, erosion, and disaster response
 - **Promotes** public participation, education, and access to environmental information
 - **Defines** roles, enforcement powers, penalties, and supports cooperation with Mediterranean partners

Key National Bodies

- **Inter-Ministerial Committee (IMC):** Coordinates national coastal policy
- **National Coastal Advisory Council:** Advises on strategy and promotes public engagement



What is an Integrated Coastal Zone Management Strategy?

An Integrated Coastal Zone Management (ICZM) Strategy provides a long-term framework for the sustainable management of Lebanon's coastal zone. It promotes coordinated decision-making across sectors and levels of governance, balancing environmental protection, economic development, and social well-being. Based on scientific evidence, stakeholder participation, and an ecosystem-based approach, the Strategy identifies strategic priorities and actions to strengthen coastal resilience, conserve natural resources, reduce risks from climate change and unplanned development, and ensure the sustainable use of the coast for present and future generations. These priorities are translated into a set of Strategic Objectives that guide the implementation of the Strategy and its long-term vision.

Definition of National Coastal Area Boundaries

Under Decree 144 (1925), Lebanon's coastline is defined by the highest winter waterline, while the territorial sea extends 12 nautical miles offshore and forms part of the public maritime domain. Although current legislation does not explicitly define the coastal zone, the ratification of the ICZM Protocol and the adoption of the Draft ICZM Law will establish a comprehensive definition encompassing both landward and seaward boundaries. Accordingly, this Strategy follows the proposed definition of the Draft ICZM Law, consistent with the ICZM Protocol (Article 2), which recognizes the coastal zone as the dynamic interface where terrestrial and marine ecosystems interact with human activities. Consistent with the ICZM Protocol (in Article 3), this Strategy defines the coastal zone as extending from the outer limit of the territorial sea to the landward limits of the designated coastal administrative units, recognizing it as the dynamic interface between marine and terrestrial ecosystems and human activities.

How was the Strategy Prepared?

The National ICZM Strategy builds on previous coastal management initiatives in Lebanon, including the Coastal Area Management Programme (CAMP), the Integrated Management of East Mediterranean Coastlines (IMAC) project, and the 2015 draft ICZM Strategy. It also draws on the ICZM Protocol, experiences from other Mediterranean countries, particularly Morocco and Montenegro, and the technical studies and analyses prepared under the current project.

The Strategy was developed through a participatory process, using a method *Climagine*¹, involving three national stakeholder workshops (July and October 2025, and February 2026) and meetings of the ICZM Advisory Team. Representatives of national and local authorities, academia, NGOs, the private sector, and international organizations contributed to identifying priorities, validating the findings, and refining the proposed strategic objectives and measures.

The consultation process progressed from assessing Lebanon's coastal challenges to defining a shared vision, prioritizing strategic actions, and strengthening the institutional and legal framework for Integrated Coastal Zone

Management. To ensure that priorities were selected transparently and objectively, the proposed measures were evaluated using a Multi-Criteria Decision Analysis (MCDA) approach based on sustainability criteria and stakeholder input, as well as using a prioritisation exercise of Nominal Group Technique². The final prioritization reflects a balanced integration of technical evidence, institutional perspectives, and stakeholder input, ensuring that the proposed measures are both technically sound and broadly supported. The Strategy also builds on a comprehensive review of national policies, legislation, previous coastal management initiatives, and relevant regional and international experience.

A detailed description of the methodology used to prioritize the strategic measures is provided in the full **Lebanon's Integrated Coastal Zone Management Strategy**.

¹ Coordinated by Plan Bleu/RAC

² Coordinated by PAP/RAC and Jean Hugé



Coastal Zone Diagnosis Overview and the ICZM Protocol for the Mediterranean

Description of the Lebanese coastal zone

The Lebanese coastline extends over approximately 220 km from Arida in the north to Ras Al-Naqoura in the south, although GIS analyses indicate a highly indented shoreline ranging from about 298 km (1962) to 371 km (2010) (Figure 1). The coast is composed predominantly of rocky shores (~80%) and sandy beaches (~20%), featuring bays, headlands, and river deltas. The continental shelf varies significantly, being wide in the north and south but very narrow in central Lebanon, where steep underwater slopes descend rapidly.



Figure 2:
Rivers of Lebanon
(Source: Fanack water)

The coastal environment is strongly influenced by freshwater systems, with 16 perennial rivers discharging into the Mediterranean and contributing sediments and nutrients, though significant water abstraction and groundwater over-extraction have reduced flows and caused aquifer salinization. Marine conditions are characterized by strong seasonal temperature variation (17–30°C), relatively high salinity, and exposure to wave action driven mainly by south-westerly winds. Tides are weak, while coastal currents generally follow a northeastward circulation with localized sediment-transporting eddies.

Lebanon's hydrographic system includes 40 rivers and streams and major basins such as the Litani, the largest in the country (Figure 2). River flow is highly seasonal, concentrated in winter and spring. Coastal estuaries, though limited in size, are ecologically important habitats, some of which are legally protected from fishing and identified for conservation. Groundwater is a critical resource, supplying most domestic and irrigation needs, but is heavily overexploited, leading to declining water tables and increasing seawater intrusion. Major karst aquifers dominate hydrogeology and are increasingly under stress. The coastal and marine ecosystems are highly biodiverse, hosting hundreds of species across planktonic, benthic,

fish, and marine mammal groups, including dolphins, turtles, and the endangered Mediterranean monk seal. However, deep-sea ecosystems remain poorly studied, with recent surveys revealing high habitat diversity and previously unrecorded species in submarine canyons.

Lebanon has established a limited but growing number of Marine Protected Areas, including the Palm Islands Nature Reserve, Tyre Coast Nature Reserve, and Abbassieh Coast Nature Reserve, alongside proposed and planned sites identified through national and regional strategies. Additional ecologically and culturally sensitive coastal areas have been prioritized for protection, reflecting the overlap between natural heritage and human settlements. Efforts to restore degraded marine habitats include the deployment of artificial reefs, which have shown encouraging biodiversity colonization and potential benefits for fisheries and ecotourism. However, ongoing pressures from urbanization, resource extraction, pollution, and coastal modification continue to threaten the ecological integrity of the Lebanese coastal zone.



Assessment of the current state and key pressures of the Lebanese coastal zone

The Lebanese coastal zone (LCZ) is a highly dynamic and densely utilized socio-ecological system that concentrates a disproportionate share of the country's population, infrastructure, economic activity, and natural capital. It supports key national functions including urban development, industry, transport, tourism, fisheries, and agriculture, while hosting ecologically significant marine and coastal habitats. However, the LCZ is under severe and growing pressure from fragmented governance, unregulated development, environmental degradation, infrastructure deficits, and climate change, all of which are undermining its ecological integrity, economic productivity, and social resilience.

I. Governance, Legal Framework, and Coastal Management

The governance of LCZ remains fragmented, outdated, and weakly enforced. Although Lebanon acceded to the ICZM Protocol in 2017, its provisions have not yet been fully transposed into national law, and the draft ICZM law remains un-adopted. Coastal management continues to rely on a patchwork of

outdated, often contradictory legal instruments, many dating back decades, with overlapping mandates across ministries and limited coordination among institutions. The absence of a legally adopted and operational definition of the coastal zone, coupled with ambiguity in jurisdictional boundaries and enforcement responsibilities, has hindered integrated planning and weakened regulatory control. This institutional fragmentation is compounded by chronic underfunding, weak political commitment, corruption, limited technical and enforcement capacity, and the lack of effective implementation mechanisms for key legal instruments, including Law 444/2002 and associated decrees. As a result, coastal governance remains largely reactive, sectoral, and unable to address cumulative pressures in an integrated manner.

II. Maritime Public Domain and Coastal Access

The Maritime Public Domain (MPD) has undergone extensive legal and illegal occupation, resulting in progressive privatization and loss of public access. Legal loopholes, weak enforcement, and repeated regularization of violations have enabled the long-term encroachment of private developments, tourist resorts, landfills, and infrastructure onto the

public coastline. Illegal occupations now exceed legal ones in both number and area, and public access to the coast has been severely restricted in many locations. Despite legal provisions protecting free access and coastal continuity, enforcement remains weak and violations are frequently tolerated or retroactively legalized, prioritizing revenue generation over ecological protection and public rights. This has significantly reduced the availability of accessible public shoreline, fragmented coastal habitats, and intensified social inequities in access to coastal resources.

III. Land Use, Urbanization, and Coastal Development

The Lebanese coast is experiencing rapid and largely unregulated urbanization, driven by demographic concentration, real estate expansion, economic centralization, and the coastal clustering of services and infrastructure. Built-up areas continue to expand at the expense of natural and semi-natural lands, with significant conversion of agricultural land, open spaces, wetlands, and coastal habitats into urban and artificial land cover. This transformation has accelerated habitat fragmentation, ecosystem degradation, and the loss of coastal landscape continuity. Urban sprawl is

compounded by weak land-use planning, outdated or absent master plans, poor enforcement of zoning and setback regulations, and widespread non-compliance with construction standards. Coastal development is further characterized by encroachment on sensitive habitats, privatization of public space, and the proliferation of hard infrastructure that reduces ecological resilience and increases exposure to coastal hazards.

IV. Water Resources, Groundwater, and Aquifers

The LCZ is highly dependent on increasingly stressed freshwater and groundwater systems. Coastal rivers, springs, and aquifers remain essential to domestic supply, irrigation, and ecosystem functioning, yet are under mounting pressure from excessive abstraction, poor watershed management, infrastructure losses, and pollution. Groundwater, particularly in coastal aquifers, is heavily overexploited through legal and illegal wells, resulting in declining water quality, saline intrusion, and reduced long-term recharge capacity. Surface water flows have also been significantly altered by upstream diversions, dams, and excessive abstraction, reducing freshwater inputs to the coast and weakening estuarine and nearshore ecological processes. These

pressures are compounded by increasing water demand, weak regulation of extraction, deteriorating infrastructure, and limited wastewater reuse, placing both water security and coastal ecosystem health at increasing risk.

V. Rivers, Estuaries, and Wetlands

Rivers, estuaries, and wetlands remain among the most productive and ecologically valuable components of the LCZ, yet they are also among the most degraded. River systems are heavily modified by abstraction, damming, pollution, and encroachment, reducing flow, sediment transport, and ecological connectivity between inland and marine systems. Estuaries, despite their limited extent, serve as critical nursery grounds, biodiversity hotspots, and hydrological buffers, but are increasingly threatened by urban expansion, wastewater discharge, solid waste accumulation, and land conversion. Coastal wetlands, already limited in extent, are under severe pressure from drainage, reclamation, pollution, and habitat fragmentation, leading to continued ecological degradation and reduced ecosystem service provision.

VI. Marine and Coastal Ecosystems

Lebanon's coastal and marine ecosystems remain biologically rich but increasingly degraded. The LCZ supports important marine habitats, including rocky reefs, sandy bottoms, estuaries, submarine canyons, seagrass assemblages, and remnant coastal wetlands, all of which sustain significant biodiversity and ecosystem services. However, these systems are under growing stress from pollution, coastal construction, habitat fragmentation, overexploitation, sediment starvation, invasive species, and cumulative anthropogenic disturbance. Coastal and marine habitats are becoming increasingly simplified and degraded, with declining ecological connectivity and resilience. Deep-sea ecosystems remain insufficiently studied, but available evidence confirms their ecological significance and vulnerability to emerging pressures, including offshore industrial development. MPAs provide an important conservation foundation, but they currently remain limited in spatial coverage, fragmented, and insufficiently resourced to ensure effective ecological protection.

VII. Fisheries and Marine Living Resources

The fisheries sector remains socially and culturally important but is under increasing ecological and economic strain. Coastal fisheries are characterized by overexploitation, weak regulation, limited enforcement, and declining productivity, compounded by habitat degradation, pollution, and the degradation of nursery and spawning grounds. Unsustainable fishing practices, inadequate fisheries governance, and insufficient monitoring of stocks have increased pressure on already stressed marine resources. The sector is further constrained by poor infrastructure, limited institutional support, and growing competition over coastal space. As marine habitats degrade and fish stocks decline, the long-term viability of artisanal fisheries and associated livelihoods is increasingly at risk.

VIII. Agriculture and Coastal Rural Production

Agriculture remains an important land use and livelihood system in parts of the LCZ, but it is under increasing pressure from land conversion, water scarcity, salinization, and pollution. Productive agricultural lands along the coast are being progressively lost to urbanization,



infrastructure expansion, and real estate development. Remaining agricultural areas face growing stress from groundwater depletion, declining water quality, seawater intrusion, and unsustainable irrigation practices. Agricultural runoff also contributes to nutrient loading and pollution in coastal waters, reinforcing land-sea pressures and contributing to the degradation of downstream marine ecosystems.

IX. Industry, Energy, and Maritime Activities

A significant share of Lebanon's industrial base is concentrated along the coast, where industries exert substantial pressure on land, water, and air quality. Industrial development is often poorly planned and weakly regulated, with inadequate treatment of effluents, direct discharge into marine waters, and significant emissions of pollutants and greenhouse gases. Coastal energy infrastructure, including thermal power generation and fuel-related activities, contributes to air pollution, thermal stress, and marine contamination, while chronic electricity shortages have increased reliance on decentralized diesel generation with additional environmental costs. Maritime activities including ports, shipping, dredging, and coastal transport infrastructure, further

intensify pressures through habitat alteration, pollution, sediment disruption, and coastal artificialization.

X. Waste Management and Pollution

Pollution remains one of the most severe and pervasive pressures affecting the LCZ. Inadequate solid and liquid waste management continue to drive widespread contamination of coastal land, rivers, groundwater, and marine waters. Municipal solid waste is still poorly managed, with continued dependence on open dumping, coastal landfills, uncontrolled disposal, and burning, all of which generate chronic pollution and degrade coastal ecosystems. Wastewater remains one of the most significant sources of marine pollution, with untreated or partially treated domestic and industrial effluents discharged directly into rivers and coastal waters. Additional pollution loads stem from industrial discharge, agricultural runoff, landfill leachate, maritime activities, and diffuse urban sources, contributing to eutrophication, microbial contamination, habitat degradation, and public health risks.

XI. Tourism and Recreation

Tourism remains a major economic function of the LCZ, but its development has been heavily concentrated in coastal

resort infrastructure, often at the expense of public access, habitat integrity, and landscape quality. Tourism growth has largely followed an extractive and privatized model centered on beach resorts and shoreline occupation, contributing to MPD encroachment, habitat loss, seasonal pressure on infrastructure, and exclusionary access. While ecotourism and nature-based opportunities exist, they remain underdeveloped relative to the scale of conventional coastal tourism. This limits the sector's sustainability and reduces its potential contribution to environmentally friendly local development.

XII. Social Conditions, Infrastructure, and Service Provision

The LCZ concentrates population growth, employment, infrastructure, and service provision, but this concentration has intensified social and environmental stress. Rapid urban growth, migration, displacement, and rising poverty have increased pressure on already overstretched infrastructure and public services, including water supply, sanitation, transport, healthcare, energy, and housing. Infrastructure deficits remain acute, particularly in wastewater, electricity, and mobility systems, contributing directly to environmental degradation and reduced quality of life. Coastal communities are increasingly exposed to une-

qual access to services, reduced access to public space, environmental health risks, and growing livelihood insecurity linked to ecological decline and economic instability.

XIII. Climate Change and Coastal Risk

Climate change is amplifying existing pressures across all coastal sectors and increasing the vulnerability of the LCZ to long term environmental and socio-economic disruption. Rising temperatures, declining precipitation, prolonged droughts, sea-level rise, and increased frequency of extreme events are already affecting water availability, coastal stability, ecosystem resilience, and human health. These changes are accelerating coastal erosion, saline intrusion, habitat loss, flooding, and infrastructure exposure, while intensifying pressure on freshwater resources, fisheries, agriculture, and public health systems.



Vision for the Lebanese Coastal Area

The Lebanese Coastal Zone (LCZ) is a resilient and sustainably managed area in which integrated, ecosystem-based planning protects marine and coastal ecosystems, enhances climate resilience, and supports inclusive socio-economic development within an effective, transparent, and participatory governance that safeguards natural and cultural heritage, ensures public access to the maritime public domain, and aligns coastal development with long-term environmental sustainability and community well-being.

The Draft ICZM Strategy

This Strategy has been developed in alignment with the Initial Recommendations Report and the Report on Stakeholder Perspectives on ICZM in Lebanon in addition to all information generated within the scope of the current action. It is informed by an inclusive consultation process involving national and international experts, parliamentarians, governmental institutions, scientific bodies, and civil society representatives. Drawing on these consultations, targeted interviews,

the assessment of the current state of the LCZ, the ICZM Protocol, and relevant Mediterranean ICZM experiences, the Strategy defines a set of strategic objectives (SOs) and associated implementation parameters to guide the effective operationalization of ICZM in Lebanon.

The Strategy is structured around the following SOs:

- 1. Governance and legal integration
- 2. Environmental and biodiversity protection
- 3. Climate adaptation and resilience
- 4. Socio-economic sustainability
- 5. Social equity and participation
- 6. Integrated spatial planning

For each Strategic Objective, measures were developed and assessed using a common set of characterization criteria and validated through dedicated stakeholder roundtables. The values reflect priorities as assessed during the development of the current Strategy and are to be adjusted in the future to reflect evolving conditions.

The measure characterization criteria include:

- **Timeframe:** estimated duration to achieve the main outcomes of the measure (Short: 1–5 years; Medium: 6–10 years; Long: 10–20 years).

- **Cost:** indicative level of investment required for national or multi-sectoral implementation (Low: < USD 250,000; Medium: USD 250,000–1,000,000; High: > USD 1,000,000).
- **Lead Agency:** the public authority holding policy ownership and a formal national mandate, responsible for coordination, decision-making, and accountability.
- **Implementing Bodies:** public institutions responsible for on-the-ground execution of measures; one or more bodies may be designated.
- **Partner institutions:** partner institutions provide technical, financial, or implementation support to deliver the main outcomes of the measure; one or more partner institutions may be designated.

An MCDA was then applied to organize, compare and prioritize measures within each SO. This analysis allowed the development of an “Implementation Framework”, bringing together the measures proposed under each SO and translating them into a practical outline for action, indicating who might lead each measure and providing a broad sense of timing and effort. A detailed Action Plan, following the MCDA applied, is provided in the full document of the ICZM Strategy.

1. Governance and Legal Integration

Definition

This objective aims to establish a coherent governance system for Lebanon's CZ. It entails continuously updating and harmonizing fragmented coast-related laws and decrees, clarifying institutional mandates, and improving implementation of existing laws and national plans as well as the coordination among ministries and local authorities mandated over coastal sectors such as land use, environment, fisheries, tourism, and infrastructure. A key outcome is the creation of a functional inter-ministerial coastal coordination mechanism, such as the ICZM Inter-ministerial Committee (IMC) and the enactment of a national ICZM Draft Law. Achieving this objective will provide the legal and administrative foundation needed to ensure consistency, accountability, and long-term sustainability in all coastal management actions.

Objective

Strengthen institutional coordination, legal coherence, enforcement capacity, and participatory governance to ensure integrated, transparent, and effective coastal zone management in Lebanon, in line with ecosystem-based approaches, climate resilience, and public interest.

Measures

A total of nine measures were identified for the SO "Governance and Legal Integration":

1. Establish a national ICZM governance framework
2. Ensure full legal alignment with the ICZM protocol and international commitments
3. Build judicial, institutional, and technical capacity
4. Strengthen policy coherence and integrated planning
5. Promote decentralized and participatory coastal governance
6. Enhance enforcement, compliance, and accountability mechanisms
7. Promote Public-Private Partnerships (PPP) and sustainable financing
8. Strengthen the legal framework for sustainable coastal development
9. Integrate climate resilience into governance and laws

Prioritization of Measures

Two measures that received the highest MCDA score are Establish a national ICZM governance framework - Create a coordinated national system for ICZM through the designation of a lead authority, the establishment of clearly mandated coastal management units at national and sub-national levels, and the institutionalization of ICZM, and Ensure full legal alignment with the ICZM protocol and international commitments - Translate all relevant obligations of the ICZM Protocol into national legal and regulatory instruments, especially the formal adoption of a national definition and spatial delineation of the Lebanese CZ in accordance with Articles 2 and 3 of the Protocol.



2. Environment and Biodiversity Protection

Definition

This objective aims to conserve and restore Lebanon’s coastal and marine ecosystems by safeguarding remaining natural habitats and rehabilitating degraded areas. It prioritizes the expansion and effective management of marine and coastal protected areas, the recovery of critical ecosystems, and the integration of biodiversity considerations into spatial planning and development decisions. Pollution prevention, waste reduction, and sustainable water management are core elements of this objective, contributing to the halt of biodiversity loss, the preservation of ecosystem services, and the long-term ecological integrity of Lebanon’s coastal zone.

Objective

Safeguard and restore Lebanon’s coastal and marine ecosystems through ecosystem-based management, biodiversity conservation, pollution control, and sustainable resource use. It aims to strengthen climate resilience, safeguard public health, and sustain ecosystem services, while supporting the long-term social and economic well-being of coastal communities.

Measures

A total of nine measures were identified for the SO “Environment and Biodiversity Protection”:

- 1. Establish a national coastal and marine environmental monitoring system
- 2. Integrate environmental sustainability into tourism and coastal development
- 3. Promote sustainable fisheries and ecosystem-based marine resource use
- 4. Strengthen water resource protection and coastal water quality
- 5. Reduce marine and coastal pollution and improve waste management
- 6. Prevent and manage biological invasions and ecosystem degradation
- 7. Strengthen protection, management, and connectivity of coastal and marine areas
- 8. Conserve and restore critical and climate-sensitive ecosystems
- 9. Strengthen research, knowledge generation, and science-based decision-making

Prioritization of Measures

Two measures that received the highest MCDA score are Establish a national coastal and marine environmental monitoring system - Establish an integrated national coastal and marine monitoring system by implementing a harmonized, multi-parameter framework that strengthens and mobilizes the National Center for Marine Sciences (NCMS) and academic institutions as research and monitoring hubs, while standardizing environmental indicators in line with Mediterranean and international benchmarks to support evidence-based ICZM implementation, and Integrate environmental sustainability into tourism and coastal development - Integrate sustainability into coastal tourism by establishing and enforcing environmental standards and carrying-capacity guidelines, embedding environmental education and awareness within tourism services, and monitoring and mitigating tourism-related impacts to ensure compliance with ICZM and protected-area regulations.



3. Climate Adaptation and Resilience

Definition

This objective aims to strengthen the resilience of Lebanon's CZ to climate change impacts by systematically integrating climate risk assessments into national and local planning processes. It promotes the adoption of nature-based solutions and climate-responsive measures across coastal sectors, ensuring that adaptation and mitigation considerations are embedded in development and infrastructure decisions. Through this approach, the objective seeks to reduce vulnerability, protect coastal communities and assets, and sustain critical ecosystem functions under evolving climatic conditions.

Objective

Strengthen the resilience of Lebanon's CZ, ecosystems, infrastructure, and communities to climate change through ecosystem-based adaptation, low-carbon development, risk-informed planning, and sustainable energy systems, ensuring long-term environmental integrity, social equity, and economic stability.

Measures

A total of eight measures were identified for the SO "Climate Adaptation and Resilience":

1. Conduct comprehensive coastal climate risk and vulnerability assessments
2. Strengthen Awareness, Capacity Building, and Behavioral Change
3. Integrate climate adaptation into ICZM, MSP, and development planning
4. Strengthen coastal disaster risk reduction and early warning systems
5. Accelerate renewable energy deployment and energy transition in coastal zones
6. Address coastal salinization and enhance groundwater recharge
7. Promote Ecosystem-Based Adaptation and Nature-Based Solutions
8. Reduce anthropogenic heat and urban climate stress in coastal cities

Prioritization of Measures

Two measures that received the highest MCDA score are Conduct comprehensive coastal climate risk and vulnerability assessments - Assess climate risks across the Lebanese coast by conducting national vulnerability studies, developing climate risk maps and decision-support tools, and establishing a national coastal climate observatory that integrates scientific data, local knowledge, and Mediterranean climate systems, and Strengthen Awareness, Capacity Building, and Behavioral Change - Enhance societal resilience by implementing public awareness campaigns on climate-resilient practices, strengthening technical capacity among municipalities and coastal professionals, and mainstreaming climate-resilience principles into education, tourism, and community-based programs.



4. Socio-Economic Sustainability

Definition

This SO seeks to promote inclusive economic growth and job creation at the local level that depend on Lebanon’s coastal and marine resources, while ensuring their long-term environmental sustainability. It supports the transition toward a sustainable blue economy in which sectors such as fisheries, aquaculture, tourism, and related activities operate within ecological limits and enhance community resilience. It emphasizes eco-tourism development, sustainable fisheries management, and circular economy practices that reduce waste and pollution. Overall, it aims to strengthen, diversify, and future-proof coastal livelihoods.

Objective

Promote resilient, inclusive, and environmentally responsible coastal economies by strengthening sustainable livelihoods, enhancing value chains, supporting small and medium enterprises, and integrating ecosystem services and climate risks into development planning, ensuring equitable benefits for coastal communities and future generations.

Measures

A total of nine measures were identified for the SO “Socio-Economic Sustainability”:

- 1. Internalize ecosystem services and climate costs in economic decision-making
- 2. Promote inclusive and equitable coastal development
- 3. Strengthen sustainable fisheries and marine-based livelihoods
- 4. Promote climate-smart and sustainable coastal agriculture
- 5. Promote sustainable and diversified coastal tourism
- 6. Incentivize green/blue production and circular economy practices
- 7. Support Small and Medium Enterprises (SMEs) and Green Coastal Enterprises
- 8. Strengthen digital, telecommunications, and market infrastructure
- 9. Enhance employment, skills retention, and local economic resilience

Prioritization of Measures

Two measures that received the highest MCDA score are Internalize ecosystem services and climate costs in economic decision-making - Internalize environmental and climate externalities by institutionalizing coastal and marine ecosystem valuation in ICZM planning, public investment, and regulatory impact assessments, and by integrating natural-capital accounting into sector policies, budgeting, and infrastructure appraisal processes, and Promote inclusive and equitable coastal development - Promote equitable coastal development by ensuring women, youth, marginalized groups, and small-scale producers benefit from economic opportunities, strengthening participatory stakeholder engagement in ICZM planning and investment prioritization, and advancing transparent, accountable governance that balances economic growth with environmental and social safeguards.



5. Social Equity and Participation

Definition

This SO emphasizes participatory, inclusive, and transparent decision-making in the management of Lebanon’s CZ. It seeks to empower municipalities, local communities, women, and youth to actively engage in coastal planning, monitoring, and management processes. Through regular stakeholder consultations, awareness initiatives, and targeted capacity-building programs, the strategic objective ensures that diverse perspectives—particularly those of vulnerable and underrepresented groups—are meaningfully integrated into coastal policies, investments, and development planning.

Objective

Promote inclusive, equitable, and participatory coastal development in Lebanon by empowering municipalities, local communities, women, youth, and marginalized groups, strengthening human capital and access to essential services, and ensuring that all stakeholders meaningfully contribute to and benefit from transparent, sustainable management of coastal and marine resources.

Measures

A total of eight measures were identified for the SO “Social Equity and Participation”:

- 1. Ensure inclusive participation in coastal governance and decision-making
- 2. Improve environmental health, water, and sanitation in coastal communities
- 3. Strengthen awareness, education, and public engagement on ICZM
- 4. Empower women and promote gender equality in coastal economies
- 5. Promote cultural heritage, sustainable tourism, and community-based enterprises
- 6. Enhance access to quality education in coastal areas
- 7. Strengthen skills development and workforce capacity for the blue economy
- 8. Strengthen community resilience and rural coastal revitalization

Prioritization of Measures

Two measures that received the highest MCDA score are Ensure inclusive participation in coastal governance and decision-making - Institutionalize inclusive coastal governance by establishing participatory planning and community-consultation platforms, elevating the roles of local communities, youth, women, fishers, and marginalized groups within ICZM, MSP, and protected-area bodies, and ensuring transparent access to information, grievance-redress mechanisms, and social-accountability tools, and Improve environmental health, water, and sanitation in coastal communities - Enhance coastal community well-being by integrating water quality, wastewater, solid waste, sanitation, and marine-pollution management with strengthened community engagement in water conservation and groundwater protection, particularly in climate-vulnerable coastal zones.



6. Integrated Spatial Planning

Definition

The final objective focuses on achieving balanced and coordinated use of coastal and marine spaces. It entails developing integrated coastal plans and a comprehensive MSP that harmonize development activities to minimize conflicts and optimize resource use. These plans will be guided by scientific data, environmental assessments, and stakeholder input, and will be implemented progressively until it covers the whole Lebanese CZ. The aim is to establish a coherent spatial framework that promotes sustainable land/sea interactions, reduces user conflicts, and preserves coastal landscapes and public access for all.

Objective

Ensure coherent, climate-resilient, and ecosystem-based spatial planning across Lebanon's coastal zone by integrating terrestrial and marine planning systems, safeguarding public access and natural assets, managing urban growth, and guiding sustainable development patterns that reduce risk, conflict, and environmental degradation.

Measures

A total of eight measures were identified for the SO "Integrated Spatial Planning":

1. **Update and operationalize the National Physical Master Plan for the Lebanese Territory**
2. **Develop and implement a national MSP framework**
3. **Establish coastal setback zones, buffers, and development controls**
4. **Promote climate-resilient and nature-based urban design**
5. **Modernize land administration and spatial data systems**
6. **Manage urban growth and reduce coastal overcrowding**
7. **Ensure sustainable tourism and coastal infrastructure development**
8. **Enhance public access, walkability, and sustainable mobility**

Prioritization of Measures

Two measures that received the highest MCDA score are Update and operationalize the National Physical Master Plan for the Lebanese Territory - Strengthen territorial planning in Lebanon by updating the National Physical Master Plan (NPMPLT) to integrate climate risks, ecosystem services, and ICZM principles, aligning municipal urban plans with the revised framework, and establishing compliance and technical-support mechanisms for effective local implementation, and Establish coastal setback zones, buffers, and development controls - Protects coastal ecosystems and public access by legally designating setback and buffer zones based on hazard and ecological criteria, embedding these regulations into planning and permitting systems, and ensuring strong enforcement against encroachment and illegal shoreline construction.



How will the Strategy be implemented?

The National ICZM Strategy establishes a strategic framework for the sustainable management of Lebanon’s coastal zone. Its implementation will be coordinated through dedicated institutional arrangements, including an **Inter-Ministerial Committee (IMC)** and an **ICZM Advisory Council**, which will oversee implementation, promote coordination across sectors, and ensure alignment with national policies and the ICZM Protocol (Figure 3).

The Strategy will be translated into concrete actions through a National ICZM Action Plan, defining implementation priorities, responsibilities, timelines, budgets, and monitoring indicators. These actions will be further refined through a participatory process involving public institutions, local authorities, academia, civil society, the private sector, and coastal communities, ensuring broad ownership and effective implementation. The Government of Lebanon (GoL) will be responsible for determining implementation priorities and sequencing.

Successful implementation will depend on sustained political commitment, inter-institutional cooperation, stakeholder participation, and adequate financial and technical resources. Further details on the institutional framework, implementation process, governance arrangements, and monitoring mechanisms are provided in the full document of ICZM Strategy.

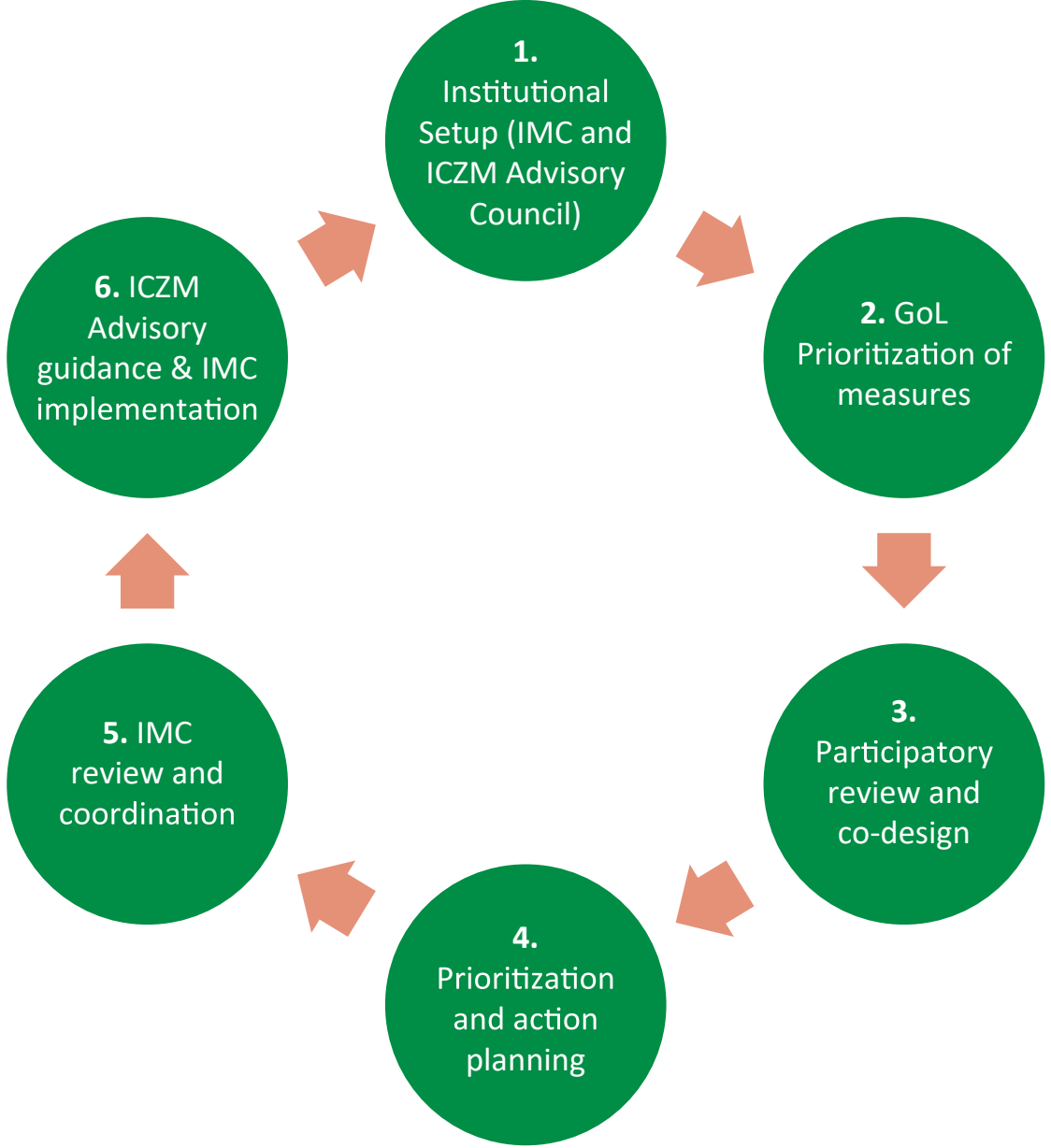


Figure 3: Cyclical Framework for the Implementation of the National ICZM Strategy in Lebanon

Action Plan

The ICZM Action Plan—including timeframe, cost, and overall priority, was developed using the MCDA methodology. This approach applied a balanced weighting scheme across three stakeholder categories: the ICZM Advisory Team (35%), thematic Working Groups (35%), and Experts (30%), ensuring that institutional priorities, sectoral perspectives, and technical inputs were adequately reflected in the final scoring. The prioritization of measures reflects the combined outcomes of the MCDA and the stakeholder consultation process. The identification of lead agencies, implementing bodies, and partner institutions was undertaken separately from the MCDA scoring. These roles were defined through a synthesis of stakeholder inputs with lead agencies determined based on majority agreement, and implementation arrangements reflecting consolidated contributions across participating institutions. Overall, the action plan represents an integrated outcome of advisory, technical, and participatory inputs. Furthermore, the selection of indicators was aligned with internationally recognized frameworks, particularly the SDGs and GBF Targets indicators, ensuring coherence with global sustainability and biodiversity objectives. For a detailed Action Plan consult the entire Lebanon's ICZM Strategy.



Conclusion

Lebanon's coastal zone remains a vital national asset, underpinning economic activity, social well-being, and ecological integrity, yet it faces chronic and escalating pressures from uncoordinated development, governance fragmentation, environmental degradation, and climate change amongst many other anthropogenic pressures. Embedded in the ICZM Protocol for the Mediterranean, this ICZM Strategy, coupled with the expected ICZM Draft Law, and through its six SOs and associated measures, provides a coherent, integrated, and participatory framework to address these challenges in line with Lebanon's commitments under the ICZM Protocol. By strengthening governance, aligning sectoral policies, protecting ecosystems, enhancing climate resilience, and promoting inclusive socio-economic development, the Strategy establishes a clear pathway toward sustainable coastal management. Its effective implementation will require sustained political commitment, institutional coordination, stakeholder engagement, and adaptive management. If fully operationalized, the Strategy can safeguard Lebanon's coastal and marine resources while securing long-term benefits for present and future generations.



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