

תורת המשחקים

تراتیجیة اللبنا

משחקים אלו הם משחקים שבהם  
השחקנים אינם יכולים לראות את  
החלטות השחקנים האחרים.

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The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of an opinion whatsoever on the part of





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# IUCN foreword

The Mediterranean region is one of the most intensively and historically important regions on the planet. It is home to 7% of the world's population living along the coast of the Mediterranean Sea, which is highly impacted by 32% of international tourism. The Sea covers only 0.8% of the global surface of the world's oceans, but includes 7% of all known marine species. Marine protected areas have gained world recognition as an effective tool to protect the marine environment, and a strong effort has recently been made in the Mediterranean to create special protection of the perceived to contain the most valuable marine habitats and species. Marine protected areas are, however, not distributed in an ecologically coherent and representative network, most of them being located along the northern shore of the Mediterranean Sea.

The Marine Protected Area Strategy for Lebanon found in this volume has been spearheaded by the Minister of Environment of the Republic of Lebanon, in cooperation with the International Union for Conservation of Nature (IUCN) with the support of other partners such as the Regional Action Centre for Special Protected Area (RAC/SPA), the Spanish Agency for International Cooperation (AECID), the Autonomous Office for National Parks of Spain (OAPN) and the MAVA Foundation. The Strategy is an important step towards increased protection of the fragile coastal zone of eastern Mediterranean countries.

We must urgently take steps to protect the protection of vulnerable ecosystems and the biodiversity area, especially of our sea, where there are significant changes on an unprecedented scale. The management effectiveness of Mediterranean marine protected areas must be improved to achieve the objectives of the Biodiversity Convention in 2020. IUCN is pleased through the Centre for Mediterranean Cooperation and the Global Marine and Polar Programme in a number of pragmatic initiatives to preserve and restore the biological integrity and to improve the governance of the Mediterranean Sea in partnership with regional actors, which have long been active in this field. This includes the Regional Action Centre for Special Protected Area, WWF, the ACCOBAMS (Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area), the General Fisheries Commission for the Mediterranean (GFCM), the MedPAN (the network of management of marine protected areas in the Mediterranean) and the scientific community at all national authorities of the region.

IUCN and the Government of Lebanon are committed to working together and building on this Strategy with the aim of creating a network of marine protected areas that contribute to the health of Lebanon's sea and marine environment.



Julia Maron-Lefevre  
Director General of IUCN  
(International Union for Conservation of Nature)

Marine protected areas (MPA) have gained world recognition as effective tools to protect the marine environment, and are much in demand in the Mediterranean, where about a hundred of them have been declared during recent decades to grant special protection to the perceived to contain the most valuable marine habitats and species. Emboldened by the complexity of saving their sea areas, the Mediterranean nations have resolved to care for their remaining crown jewels from the sea, and struggle to conserve them through MPA designation.

In Lebanon, there are no legally declared marine protected areas: the Palm Island Nature Reserve in North Lebanon and the Tire Coast Nature Reserve in South Lebanon. Presently, the MoE and IUCN are implementing with CAPN, AECID and MAVA funding the project **Sustainable Marine Environment**.

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The Lebanese coastal line extends over 240 km in length. The coastal area, which constitutes around 8% of the total area of the country, comprises 33% of the total built-up area in the country and holds 55% of the total population (Dar Al-Handasah & Latrifi, 2003). The Lebanese coastal area is part of the Mediterranean region, which is considered a global biodiversity hotspot, supporting an amazing diversity and abundance of marine life and human activities, contributing to the Lebanese economy and offering enormous potential for future economic, social and cultural benefits. Coastal zones are ideal places

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National protection of the Marine Protected Area in Lebanon mainly the marine & coastal nature is influenced by several international conventions and agreements that have either been signed or ratified by the Lebanese government. These conventions include:

In addition, the CBD has many programmes of work including a programme of work directly related to marine & coastal protected areas : 1) the programme of work on protected areas , 2) the programme of work on marine & coastal biodiversity .

The Programme of Work on Protected Areas (POWPA) includes 16 goals, divided across 4 programme elements . Goal 1.1 of the POWPA and its related target are the following:

Goal 1.1: To establish and strengthen national and regional systems of protected areas integrated into a global network and a contribution to global agreed goals .

Target B 2010, 2011 and 2012 in the marine area, a global network of comprehensive, representative and effectively managed national and regional protected areas is established.







Lebanon has a range of legislative and policy tools available to establish and manage marine protected areas. The Ministry of Environment has a specific mandate in this regard and needs to develop this Strategy to establish and manage a network of marine protected areas in Lebanon and exchange regional experience in this regard.

In addition, the MoE will be seeking the cooperation of other administrations holding a mandate and responsibilities in marine-related issues such as the Ministry of Agriculture, Ministry of Public Works and Transport, Ministry of National Defence, Ministry of Interior and Municipalities as well as other stakeholders such as a local NGO, Fishermen's Order and local communities to ensure the proper management of MPA by involving a pe



The Ministry of Environment (MoE) is the administrative authority over the natural heritage in Lebanon and is responsible for their

Periodically, in the company of the Management Team (or other committee or agency) is fully responsible for the area), in particular

public land and all private land, (3) detail the management of the nature reserve (APAC and management team) and formally recognize the legal identity of the APAC, (4) address the financing mechanism of the nature reserve, (5) grant the APAC the right to collect entrance fees and impose non-pollution, (6) seeking to encourage sustainable use of the nature reserve by identifying the protection objectives.

2. The MoE developed a National Action Plan for Protected Area (NAPPA) within the framework of the Stable Institutional Strategy for Protected Area Management Project (SISPAM, 2004-2006) executed by the MoE and UNDP and funded by the EU. The NAPPA outlines purpose, objectives, and tasks that need to be fulfilled in order to effectively manage protected areas in Lebanon. A prioritization document has determined the priorities and actions for effective management of Protected Areas in Lebanon. It allocates roles and responsibilities and budget estimates for the implementation of priorities and actions. Based on the NAPPA, the MoE developed a draft programme of work and the necessary budget from the public treasury for the implementation of the activities foreseen in the NAPPA. Once the programme is endorsed, the necessary funds will be allocated to finance the activities and actions outlined in the NAPPA.

3. The MoE, along with SISPAM, developed a new PA category system, as inspired by the IUCN classification system for protected areas and would comprise four categories; for each category, criteria for the establishment of the PA were defined, as well as a management objective.

4. A national financial sustainable strategy for PA has suggested alternative mechanisms for financing PA management (developed under SISPAM)

5. A database for available sources of funding for PA among international sources which include a list of potential donors, conditions and procedures for application (developed under SISPAM)

6. A National Capacity Building Strategy for key players in PA management is currently being developed by MoE, APAC and management team (developed under SISPAM)

7. A Management Toolkit for Protected Areas (developed under SISPAM) including: (a) Monitoring and evaluation indicators for PA management, (a) Job description for PA management team, (b) Policies and procedures for improved management.

**PALM ISLANDS NATURE RR**

## **TYRE COAST NATURE RESERVE (TCNR)**

The TCNR was established by Law no. 708 dated November 5, 1998. The law also has a committee established through a decision from the Minister of Environment for a period of one year and including the following members to undertake the management of the site; the following representatives are:

- Municipality of Tyre
- Kaemakam or Governor of the area of Tyre
- Local NGO
- Minister of Agriculture

The current managing committee (APAC) of the TCNR is formed by representatives of:

- Minister of Agriculture
- Kaemakam or Governor of the area of Tyre
- Municipality of Tyre
- Amaj (NGO)
- The Protection of Environment - Tyre (NGO).

This committee (APAC) works under the overall supervision and support from the Minister of Environment (MoE). The management team in the case of the TCNR includes a permanent manager, 2 full-time rangers, 1 part-time ranger and an administrative assistant. A one-year Management Plan was developed for the TCNR. This Management Plan was prepared under the Mediterranean Coastal Project, which is an initiative under the Ramat Convention. The regional project was executed in Lebanon over a period of 7 years from 1999 to 2006 and funded by the FFEM and national contribution from the Lebanese. The national project was executed in Lebanon by the Minister of Environment and managed by the UNDP from 2002 to 2006. The Management Plan was prepared as part of different components that aim at conserving the biodiversity of global and regional importance in the Mediterranean basin. The Management Plan was developed in consultation with the local stakeholder, and endorsed by the Minister of Environment (MoE) and recently by a decree from the Council of Ministers (decree 8044 dated 25/4/2012) upon initiative and proposal from the MoE.

The TCNR beach is a sea turtle (*Caretta caretta*) nesting site.  
RAC/SPA: Satellite tracking of marine turtles. Nabigha Dakik.

## 1.7. Marine Protected Area Network

### FUNCTIONS AND BENEFITS OF THE MPA NETWORK

Active management strategies to address man-made affecting marine and coastal ecosystems and resources in the implementation of marine protected areas (MPA). A marine protected area is a coastal or offshore marine area that is managed to protect natural and/or cultural resources. The International Union for Conservation of Nature (IUCN) classifies MPA into 6 categories, ranging from highly protected reserves, intended only for scientific research or wilderness conservation, to multiple-use areas, created to foster the sustainable use of natural ecosystems and resources.

MPA networks can contribute to sustainable development goals by fostering integrated sea and coastal management through 3 inter-related functions and benefits:

1. Ecological: the network can help maintain functional marine ecosystems by encompassing the temporal and spatial scale of ecological systems.
2. Social: the network can help reduce and manage conflicts in the use of natural resources.
3. Economical: the network can facilitate the efficiency of resources.

### NETWORK DESIGN AND APPROACH IN LEBANON

The objective of the Lebanon MPA network are:

1. To conserve marine biodiversity and natural resources and
2. To address local marine resource management needs.

The scientific design of the Lebanon MPA network is based largely on a literature scientific assessment of biodiversity and resources in the country, through various field trips which included land inpection (supplemented by satellite image), snorkelling (tide pool and halo area of less than 5m depth) and SCUBA diving (5-20m depth) wherever appropriate. Invertebrates and diatoms in the local herbaria from various areas were particularly interesting and relevant.

IUCN Category		Main Objective
IA	Strict Nature Reserve	Strictly protected areas are a type of protected biodiversity and also possible geological/geomorphological features, where human activities and impacts are strictly controlled and limited to ensure protection of the conservation value. Such protected areas can serve as an indispensable reference area for scientific research and monitoring.
IB	Wilderness Area	Protected areas are all large unmodified or lightly modified areas retaining their natural character and in essence, which permanent or significant human habitation, which are protected and managed to avoid or prevent their natural condition.
II	National park	Protected areas are large natural or near natural areas that are a type of protected large-scale ecological processes, along with the complement of species and ecosystem characteristic of the area, which also provide a foundation for environmental and cultural compatible spiritual, scientific, educational, recreational and tourism. 53-12(I)-15(I)-15(O)-15(N)-12(e)-cc3rg-12(e)6(-)-106(l)-14(-)-17(n)615(n)-33(f)6(e)-16(o)-15(o)-15(ch)ra3-11(n)-12(l)-13(h)45(f)JT(3-16(r)-)(p)-16(e)-11(o)-15(45)-13(3-16(r)-1418f1(r)-23-16(r)-p)ap018r4d(N)-17(a)-6(-)-13(c)-1a4254(-)-10(c)-9(l)-10(e)-4(o)-gpr-14(c). 4(o)-T1(c)151(-)-13(4)-7

C. U. a. a. U. a.

The MPA network is elected in the aim of:

E

## LIST OF PROPOSED MPA IN LEBANON

Based on the criteria mentioned above, the following scientific assessment (Bariche, 2008; OCEANA, 2011; ACCOBAMS, 2010 and MoE report) and even the old time, the following were elected due to their richness and importance in biodiversity.

## Proposed MPA areas (km<sup>2</sup>)

According to the declaration by the GFCM (in the agreement of all Mediterranean countries), a Fisheries Restricted Area has been declared, banning trawling activities for all the Mediterranean in the 1500 nautical miles from the Lebanese territorial sea. This area represents about 1,240 km<sup>2</sup>, including the following specific features, as described by OCEANA (2010), namely:

15. Beirut Carpmen,
16. Saint George Canon,
17. Jounieh Canon and
18. Sour Canon.

Lebanon could envisage two options: declare the whole area under 1000 m in the territorial sea as an MPA, or declare the following features presented above as MPA and a deep sea work with a common management plan.

Part 3 of this document provides a description of the main features (location, quality and importance, Vulnerability, conservation status, habitat type, criteria applicable) and map for each proposed site. For deep sea sites, a proposal for the management of specific activities is provided.

This framework proposes strategic priorities for MPA in Lebanon. The priorities are in harmony with the requirements of the major international convention in this field, in particular the biodiversity-related Convention and Agreements ratified by the Government of Lebanon, mainly the Convention on Biological Diversity (CBD), the Special Protected Area and Biodiversity Protocol under the Barcelona Convention, the African-European Migration Water Bird Agreement (AEWA), the Agreement on Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) and the Ramsar Convention on Wetland of International Importance especially Waterfowl Habitats. The proposed MPA network in Lebanon will progress towards becoming part of an integrated coastal zone management perspective, first at a national, then a Mediterranean level.

The following table details the objectives under each strategic area and the activities needed to achieve each objective.


**VISION :**  
**AN EFFECTIVE MARINE PROTECTED AREAS NETWORK CONTRIBUTING TO SUSTAINABLE DEVELOPMENT BY ENHANCING NATURAL AND CULTURAL DIVERSITY .**

The current marine protected areas network includes three strategic areas as follows :

Strategic Area 1:

**S**outhern **MPA** area

Strategic Area 2:

**C**entral **MPA** area

Strategic Area 3:

**D**istrict **MPA** area





	62. Set up indicator and monitoring to ensure the proper implementation of the national financial sustainable strategy for PA.
	63. Endorse the Program Law prepared by the MoE to execute the NAPPA, have a developed by the MoE and integrate the Program Law into the national budget of the GoI, which will ensure the proper budget to implement the activities mentioned in the NAPPA including those related to MPA.
	64. Mobilize necessary financial resources at national and international level to implement the activities in this strategy on the MPA network.
<b>Output 14:</b> Develop Source of Funding for Marine Protected Area Management	65. Continue to collaborate MoE fund to PA including MPA in Lebanon on an annual basis and to the MPA once established.
	66. Assist the MPA in revenue and expense annual.
	67. Review and update if needed the database developed by the MoE for available source of funding for PA among international source which include a list of potential donor, condition and procedure for application, and highlight among the donor those relevant who are dedicated specifically to MPA and marine ecosystem.
	68. Disseminate the database of all accessible international and national source of funding for PA.
	69. Prepare and distribute annual a report on MPA contribution.
<b>Output 15:</b> Update and Monitor Existing Budget Plan	70. Hire a budget planning/ financial expert to support the budget planning process.
	O72 Budgeting for the MPA network (including the MPA network) - 3463 (comm)
	O73 Organize a meeting for the MPA network (including the MPA network) - 3463 (comm)
	433 Plan and organize a meeting for the MPA network (including the MPA network) - 3463 (comm)




### 3. The proposed Marine Protected Area Network

The following table illustrates the proposed MPA network:

1. Proposed Marine Protected Area	Site 1: Naqurah	الناقورة
	Site 2: S...	
	Site 3: Ra...	الروشة
	Site 4: B... P... a...	حاجز ميناء بيروت
	Site 5: B...	الجبيل
	Site 6: M... a a	المدفون
	Site 7: Ba... P... a a	
	Site 8: Ra... C... a a	رأس الشقعة
	Site 9: E... P... a	أنفه
2. Proposed MPA	Site 10: L... a E... a	
	Site 11: A... a... a	مصب نهر الأولي
	Site 12: Da... a	
	Site 13: Na... l... a... a	مصب نهر ابراهيم
	Site 14: A... a... a	مصب نهر العريضة
3. Proposed D... a... (Area 1000...)	The area could be declared an MPA alone (Article 15) or considering the 4 specific (Article 15 to 18) corresponding to the four identified features. The management regulation could be the same in both cases.	

3.1.



**SITE 2: SIDON ROCKS**

<p><b>L</b> <b>Ua</b></p>	<p>33° 44' 19.67" 35° 22' 4.32" Sidon Rock is located in the marine area of the city of Saida, located in the governorate of South Lebanon.</p>
<p><b>Q</b> <b>a</b> <b>a</b> <b>a</b> <b>U</b></p>	<p>Islet of rock and hermit reef in the vicinity of Saida. A beach composed of gravel found nearby a small area near the Aqil Pier. Hard bottom in shallow area and rounded boulder and soft bottom. Saida (Sidon) include an archaeological and historic feature site has been nominated (1984) as a UNESCO World Heritage Site. Very low biodiversity, dominated by introduced species.</p>
<p><b>V</b> <b>a</b></p>	<p>Presence on hermit platform, fishing activity, harvesting activity, pearling, blanching (capoon), agricultural runoff, sewage/industrial runoff, eutrophication and recreational activity.</p>
<p><b>C</b> <b>a</b> <b>a</b> <b>a</b></p>	<p>Isolated island, UNESCO site.</p>
<p><b>H</b> <b>a</b> <b>a</b></p>	<p>Hermit platform of shallow moderate depth; rock and coralligenous concretions at shallow depth; large rounding of bottom area composed mainly of sand and silt. Edge of a eelgrass meadow.</p>
<p><b>C</b> <b>a</b> <b>a</b> <b>Ua</b></p>	<p>Nursery, feeding ground, habitat for soft bottom community, habitat for eelgrass meadow community.</p>





**SITE 3: RAOUCHEH CLIFFS AND CAVES**

<p><b>L</b> <b>U</b> <b>a</b></p>	<p>33° 53' 32.04"          35° 28' 13.38"          Located at Beirut, the eastern-most tip in the governorate of Beirut.</p>
<p><b>Q</b> <b>a</b> <b>a</b> <b>a</b> <b>U</b></p>	<p>Beautiful limestone cliff area with a large standing rock formation (Pigeon Rock). Shallow hard under water beach extending over most of the area. Soft bottom found a greater depth. Archaeological and historic site and a popular tourist destination (scale bar 250m).</p>
<p><b>V</b> <b>a</b></p>	



**SITE 4: BEIRUT PORT OUTER PLATFORM**

<b>Location</b>	33°54'29.07" 35°31'17.82" Located in Beirut city, in the governorate of Beirut.
<b>Quality</b>	Artificial reef composed of a long jetty (>2km) has protected the port of Beirut. Concrete structure of ballast rock and border of various materials create artificial cause and crevice which act as an artificial reef.
<b>Value</b>	Fishing activity, harvesting activity, pearling, ball fishing (cannon), agricultural runoff, sewage/industrial runoff, eutrophication and important maritime traffic.
<b>Conservation</b>	To be defined.
<b>Health</b>	Artificial reef shall have depth; of bottom area; the edge of a seagrass meadow.
<b>Conservation</b>	Nursery, spawning ground, feeding ground, habitat for hard bottom community, habitat for soft bottom community.



**SITE 5: BYBLOS**


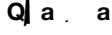





<p><b>L</b> <b>Ua</b></p>	<p>34° 07' 18.00" 35° 38' 38.35" This site is located in the city of Byblos, Governorate of North Lebanon, 40 km of Beirut.</p>
<p><b>Q</b> <b>a</b> <b>a</b> <b>a</b> <b>U</b></p>	<p>Large, eroded reef with igni can pond. A beach composed of gravel is found north of the area and the Byblos harbor port lies to the south. Hard bottom found in shallow area and of bottom with a eagra meadow dominates deeper water. Archaeological and historic features.</p>
<p><b>V</b> <b>a</b></p>	<p>Presence on eroded platform, including agriculture, harbor, pearling, blanching (capoon), traditional agriculture, industrial, agriculture/industrial, agriculture, agriculture.</p>
<p><b>C</b> <b>a</b> <b>a</b> <b>a</b></p>	<p>Byblos (Byblos) is a UNESCO World Heritage Site (Cultural, III, IV &amp; VI).</p>
<p><b>H</b> <b>a</b> <b>a</b> <b>a</b></p>	<p>Remained platform of relatively large size; rock and coralligenous concretions in shallow depth; of bottom area with large eagra meadow in deeper water.</p>
<p><b>C</b> <b>a</b> <b>a</b> <b>Ua</b></p>	<p>Nursery, spawning ground, feeding ground, habitat for hard bottom community, habitat for soft bottom community, habitat for eagra meadow community.</p>

Han El Shaer.



**SITE 6: MEDFOUN ROCKY AREA**

المدفون




<p><b>L</b> </p>	<p>34 12' 29.49 35 38' 37.89 Located in North Lebanon Governorate, 50 km from Beirut.</p>
<p><b>Q</b>  </p>	<p>Rock area with moderate cliff. Hard under a er bottom with occasional of bottom patches. This area could be considered a part protected since it lies within a military area.</p>
<p><b>V</b> </p>	<p>Presence on a moderate platform; mining activities, harvesting activities, pearling, blasting (capoon), traditional agricultural runoff, sewage/industrial runoff.</p>
<p><b>C</b> </p>	<p>To be defined.</p>
<p><b>H</b> </p>	<p>Moderate reef and pool of moderate in the close to the surface; rock and coralline concretions at greater depth; crevice and overhang common, and occasional of bottom patches present.</p>
<p><b>C</b> </p>	<p>Nursery, spawning ground, feeding ground, habitat for hard bottom community, habitat for soft bottom community.</p>

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**SITE 7: BATROUN PHOENICIAN WALL**

<p><b>L</b> <b>Ua</b></p> 	<p>34° 15' 3.54"          35° 39' 20.45"          Located in the Governorate of North Lebanon,          55 km from Beirut</p> 
<p><b>Q</b> <b>a</b> <b>a</b> <b>a</b> <b>U</b></p> 	



**SITE 8: RAS CHEKAA CLIFFS**

<p><b>L</b></p>	<p>34° 18' 47.56"          35° 40' 58.03"          Located in North Lebanon Governorate, 60 km from Beirut.</p>
<p><b>Q</b></p>	<p>Limestone cliff area with hard under layer bottom and cave. Land cape and sea cape with cultural and religious importance.</p>
<p><b>V</b></p>	



**SITE 9: ENFEH PENINSULA**

<p><b>Loua</b></p>	<p>34 21' 39.54          35 43' 37.93          Located in the North Lebanon Governorate, 63 km from Beirut.</p>



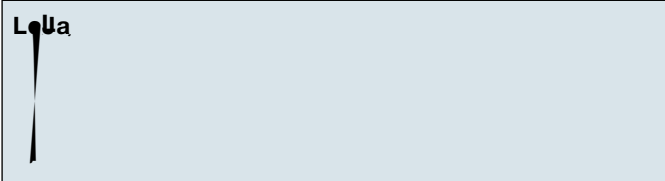
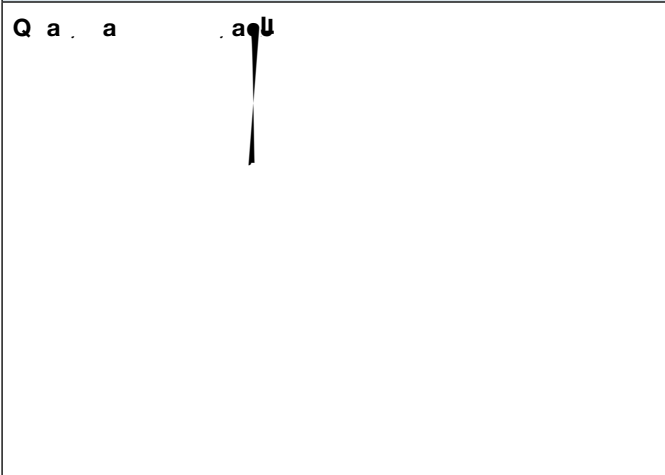






### 3.2. Proposed Marine Protected Area e

#### SITE 10: LITANI ESTUARY

	<p>33° 20' 19.28" 35° 14' 42.05"</p> <p>Located in South Lebanon Governorate. The river rises in the fertile Beqaa Valley, east of Baalbek, and empties into the Mediterranean Sea north of Tyre.</p>
	<p>The Litani River is an important water resource in southern Lebanon. Exceeding 140 km in length, it is the longest river in Lebanon and provides an average annual discharge of 920 million cubic meters. The water of the Litani is both original and originates within the border of Lebanon.</p>
	<p>V 3-( )-1 ( 3- )-1 -16-12(4(( )-1( . ( ) ) ( )-T10 1</p>



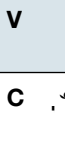



**SITE 11: AWALLY ESTUARY**

<p><b>L</b> <b>U</b> a</p>	<p>33 35' 18.90 35 23' 8.58 The A ali i a perennial river o ing in So h Lebanon Governora e.</p>
<p><b>Q</b> <b>a</b> <b>a</b> <b>a</b> a <b>U</b></p>	<p>The A ali i a perennial river o ing in So h Lebanon. i 48 kilometre (30 mi) long, originating from the Barok mountain a a height of 1,492 metre (4,895 f) and the Nihamo nain. The A ali i is supplemented by o ribarie , the Barok and Aara river . The A ali i al o known a the Bi ri river in its upper ec ion; i o thro gh the e ern face of Mo n Lebanon and into the Mediterranean. The A ali river ha a di charge of 10.1625 m<sup>3</sup>/ (358.89 c f / ), i form a a er hed i h an area of abo 294 km<sup>2</sup> (114 d mi). The A all river e ar i important in term of herie and eagra meado . Habia i a combination of ph cal fea re a8(m)-11(e)-10()-98chem-18inal olion e -3()-8(pl-11()-9(i)-7(n)-10(g)-)-98c d-3()-8(p)-3()-89riel ee 525.</p>



**SITE 12: DAMOUR ESTUARY**

<p><b>L</b> </p>	<p>33° 42' 20.82"          35° 26' 23.15"          Located in South Lebanon Governorate, in Damour city, which is situated a 24 km south of Beirut.</p>
<p><b>Q</b> </p>	<p>The site is characterized by a shallow and bottom area with eelgrass meadows in patches. The estuary is a nursery, spawning and feeding ground for numerous species. The green turtle (Chelonia mydas) has been recorded in this site.</p>
<p><b>V</b> </p>	<p>An area targeted by shrimp aquaculture, agriculture aquaculture, eel-farming/industrial runoff.</p>
<p><b>C</b> </p>	



**SITE 13: NAHR IBRAHIM ESTUARY**

<p><b>L. Ua</b></p>	<p>34° 03' 49.95" 35° 38' 33.67" Ibrahim River is a small river in the Mount Lebanon Governorate in Lebanon. It passes through the mouth of Nahr Ibrahim before emptying into the Mediterranean Sea. The river takes its name from the river. Today, it is one of the protected areas in Lebanon.</p>
<p><b>Q. a. a. a. U</b></p>	<p>The river characterized by a wide and bottom area with eagra meadows in patches. The estuary is a nursery, spawning and feeding ground for numerous species. The green turtle (<i>Chelonia mydas</i>) has been recorded here.</p>
<p><b>V. a.</b></p>	<p>The area is largely used by fishing activities, agriculture activities, sewage/industrial runoff.</p>
<p><b>C. a. a. a.</b></p>	<p>MPA status to be determined. According to the decision of the Minister of Agriculture no. 385/1 dated January 26, 1997, fishing activities are prohibited in all estuaries along the coast.</p>
<p><b>Ha. a.</b></p>	<p>Coastal wetland (estuary), and beaches and marine vegetation beds.</p>
<p><b>C. a. a. Ua</b></p>	<p>Importance of threatened species and habitats, fragile habitats, low recovery.</p>

Han El Shaer.





**SITE 14: AREEDA ESTUARY**




### 3.3. Proposed deep sea site

Lebanon's territorial sea contains deep sea areas, more than 1000 m depth; these areas include a number of habitats that may represent potential hot spots of biodiversity. Knowledge of these

In both cases, the following management measures could be envisaged:

- a. ban of trawling as per the GFCM decision, keeping other fishing techniques (no disturbing the sea bottom) as per national legislation and
- b. application of the existing national legislation and international convention or agreement regulation for other human activities such as maritime traffic, cable and pipeline, exploration and exploitation of mineral resource (all these activities in the proposed MPA or MPA being subject to EIA and SEA) and
- c. specific conservation measures for submarine archaeological or historical site or particular species of importance.

In addition, if considered appropriate, deep sea conservation elements such as the presence of marine mammal or deep sea cold coral, this site could be proposed as a SPAMI under the Barcelona Convention.





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