



**Terms of Reference for a National Consultant (Lebanon) to develop  
“An Atlas of Distribution for coastal and marine birds of Lebanon”**

“Market Policy and Legislative Development for Mainstreaming the Sustainable Management of Marine and Coastal Ecosystems in Lebanon” Project

*May, 2019*

## 1. Introduction

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The marine and coastal biodiversity of Lebanon is severely degraded predominantly due to a lack of proper enforcement of rules and regulations related to the marine and coastal zone, combined with a lack of consolidated data and information on the marine and coastal biodiversity and limited awareness of the value and need for appropriate management amongst stakeholders.

The Lebanese coastline extends 220 km from Abdi in the North to Naqoura in the South along a north-south axis in the eastern Mediterranean. It is mainly a rocky shoreline with stretches of sand (20%) and pebbles inhabited by a variety of common and endangered species. This coastline includes 3 bays, several headlands and river mouths. Nearly 55% of the population lives on the coast and industrial, commercial and urban activities are concentrated on the water's edge. Within a 500m bandwidth urban areas occupy 40%, agriculture 41% and natural areas 19%.

The marine and coastal fauna and flora in Lebanon is considered Mediterranean with some sub-tropical elements. However, there are few published studies that document the ecosystem diversity and its components (fish, benthic communities, invertebrates, marine flora, sea avifauna, habitats). There are currently two officially declared coastal protected areas: Tyre Coast Nature Reserve in the south and the Palm Islands Nature Reserve in the north.

Unfortunately, over the years, the marine and coastal ecosystem in Lebanon has been threatened by a multitude of factors that have caused the loss of species, the fragmentation or destruction of habitats: urban sprawl, industrialization, domestic wastes, tourist establishments, sand and pebble extraction, sand dredging, sea filling, water pollution, illegal and overfishing. Man-made embankments have destroyed several important biocenoses, which are vital environments for the spawning and feeding of several species of coastal and deep-sea fish. In addition, the sea birds suffer also from persecution, illegal fishing using poisonous products such as aluminum phosphide, lannate, in addition to the use of dynamite. On beaches, gull's eggs are stolen by fishermen to use them as aphrodisiac food. Gulls, waders and marine birds are killed by trash accidentally ingested; and in the sea the diving cormorants are caught by fishing nets.

These destructive activities are predominantly due to the lack of law enforcement and lack of public awareness. Moreover, most recently, the Lebanese coastline has been affected by a major oil spill that resulted from the Israeli bombing of Jiyeh power plant in July 2006. This oil spill resulted in the mortality of many oiled sea birds as well as terrestrial birds on migration.

There is a rarity of baseline studies that document the ecosystem components, ecosystem services and characteristics as well as the marine species including marine birds.

IUCN is currently implementing the *"Policy and Legislative Development for Mainstreaming the Sustainable Management of Marine and Coastal Ecosystems in Lebanon"* project in partnership with the Lebanese Ministry of Environment and with a fund from the GEF through the UN Environment as an implementing agency. The project aims to create an enabling integrated framework for coastal and marine biodiversity management and protection, and to mainstream marine and coastal

biodiversity into national plans and coastal zone management plans, with particular focus on the impact of climate change on biodiversity. As such, it provides an opportunity to coordinate with past and new initiatives in the region to address gaps in assessments, and seek sustainable and economically viable policy and technological options for the protection of key marine and coastal biodiversity to be included in coastal zone management plans, Marine Protected Area (MPA) plans and integrated into national plans.

## 2. Objectives

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The objectives of the present terms of reference will be to develop an Atlas of distribution for the coastal and marine bird species in Lebanon which will contribute in achieving the following:

- Capture the diversity of marine and coastal birds of Lebanon, and illuminate their conservation status in the country based on literature review, rapid assessment field visits, in addition to field surveys (shore and offshore) to update the data on the species and validate the existing one.
- Enhance and increase the availability and access to spatial data that could support the decision making process related to mainstreaming the conservation of marine and coastal biodiversity into the coastal zone planning and management.
- Contribute to feeding the project online data base with data and maps on the distributions of marine bird species with importance for conservation.
- Elaborate maps, in an Atlas, illustrating where and why birds are most under threat, and what is being done to protect them.
- Prepare individual distribution maps of the coastal and marine bird species along the Lebanese coast with frequencies, numbers and densities, summary of conservation implications.
- Enrich the Atlas with bird classification and behavior, relationship between birds and their habitats, and how to protect their threatened species.
- Examine key factors influencing the spatial distribution of birds along the Lebanese coast.
- Conduct a national workshop to raise awareness about the coastal and marine birds of Lebanon and to disseminate the output of this activity (The Atlas of Distribution and species accounts).
- Provide policy and management recommendations in order to minimize threats on coastal and marine birds, and enhance their integration in the national coastal zone planning, including recommendation on the potential mitigation measures for development projects affecting marine and marine birds.
- Provide recommendation for the potential designation of new IBA's along the Lebanese coast, and mark important bird areas that are not currently under any designation.

### 3. Scope of Work

Under the supervision of the "Policy and Legislative Development for Mainstreaming the Sustainable Management of Marine and Coastal Ecosystems in Lebanon" project management unit at IUCN ROWA and the Head of the Department of Ecosystems at the Ministry of Environment, the consultant will provide the following services:

Atlas of the coastal and marine birds species				
Action point	Method	Reporting method	Reporting beneficiary	Due date
Inception Report	Methodology, standards and procedures	1 Report	Report documented and submitted to IUCN ROWA	1 <sup>st</sup> week of June, 2019
Maps of distribution and densities of key coastal and seabird species in Lebanon.	One map per species is produced	1 Report	Premier distribution maps for birds in Lebanon finalized and submitted to IUCN ROWA	By end of June, 2019
Species distribution maps with behavioral description and reasons behind threats and conservation measures based on their distribution, in addition to factors influencing their distribution. Frequencies, densities, conservation implications and further readings are a must for species accounts. These maps can be uploaded to the projects web-based platform.	Most significant coastal and marine bird species in Lebanon are mapped in relation to habitat preferences, behavior and threats.	1 Report with a map package containing JPEG maps and shapefiles for the distribution	Finalized maps submitted to IUCN ROWA	By mid of July, 2019
Preparation of draft recommendations for adoption by the relevant national authorities and key stakeholders: a. policy recommendations for official national authorities responsible for the coastal zone planning and management, and b. recommendations specific for fishermen and general public, which include measures to conserve the coastal and marine birds in Lebanon, and to prevent and minimize the threats to these species based on the distribution of species densities	Proposed recommendations on coastal and marine birds conservation based on maps of distribution of densities.	1 Report	Final measures are developed and submitted to IUCN ROWA	By end of July, 2019

c. Recommendation for the potential designation of new IBA's along the Lebanese coast, and mark important bird areas that are not currently under any designation				
Conduct a national workshop to disseminate the outputs of this activity (Atlas and measures and recommendations to protect the coastal and marine species).	Officials, reserves managers and experts are trained on evaluation and mapping techniques	1 Workshop	Workshop materials and list of participants 'workshop report.	By mid-August, 2019
Final report summarizing this activity and the outputs including the workshop report	Reference guidance note developed and shared	1 Final Report		By 20 <sup>th</sup> of August, 2019

The above expected outputs for each required activity are intended as guidelines. The consultant is expected to provide input on requirements based on his/her own knowledge and experience when carrying out the work as necessary.

#### 4. Qualifications:

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Individual consultants willing to apply should have the following qualifications. In case of a firm, the team should include at least one expert who has the following qualifications:

- At least Master's degree in ornithology, or ecology/behaviours of birds, degree related to sea birds is an asset
- At least 7 years of experience in projects/activities in the field of birds species, projects in marine field is an asset
- At least 7 years of experience in research related to bird species.
- Demonstrated skills in using one of the GIS/ mapping software packages
- Knowledge and previous experience in the ecosystems of Lebanon

#### 5. Deliverables

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All written deliverables shall be delivered in one original hard copy, two hard copies and one electronic soft copy, preferably in Microsoft Word format, where applicable.

The following deliverables are requested:

- 1) An Inception Report, in which the consultant will highlight the methodology, standards and procedures of the assignment and in which s/he may propose for one time only an amendment to the scheduled deliverables.
- 2) Individual maps in JPEG and GIS shapefile format of coastal and seabird species with distribution of numbers and densities, behavior, threats faced, reasons behind threats, conservation implications, and habitats preferred (one map by species accounts).

- 3) A common map in JPEG and GIS shapefile format of the overlay of rare coastal and seabird species with distribution of numbers and densities, behavior, threats faced and reasons behind threats.
- 4) Draft national regulations for adoption by the relevant national institutions which include the measures to take to prevent and minimize the threats on Coastal and Marine Species in Lebanon based on the distribution of densities and frequencies, and recommendations specific for fishermen and general public, for the conservation of these species.
- 5) A national workshop to raise awareness about the coastal and marine birds of Lebanon and to disseminate the outputs of this activity. (Atlas of distribution and species account)
- 6) Final report summarizing the activities and the outputs under this assignment including: a. the workshop report, b. recommendations for the potential designation of new IBA's along the Lebanese coast, and mark important bird areas that are not currently under any designation, and d. including recommendation on the potential mitigation measures for development projects affecting marine and sea birds.

## **6. Language Requirements**

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All requested reports/deliverables shall be written in English and delivered in both hard and soft copies. However, the workshop materials shall be made available/conducted both in Arabic and English.

## **7. Scope of cost proposal**

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The consultant will be paid through a lump sum amount which is all-costs inclusive. Note that the contract price is fixed regardless of changes in the cost component. IUCN will be charge of organizing the Training Workshops and covering the fees of venues and participants.

## **8. Timing**

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The expected time frame shall not exceed 3 months. This assignment is expected to start on the 1<sup>st</sup> of June, 2019 and the maximum deadline for its completion is by the 20<sup>th</sup> of August 2019.

## **9. Submissions**

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### **10.1 Technical proposal**

#### **For individual consultants:**

- a) Personal CV indicating all past experience in the field of bird species and marine birds species in the Mediterranean Sea, marine environment policies and marine activities, as well as the contact details (email and telephone number) of the candidate and at least three (3) professional references.
- b) Brief technical proposal including a methodological note on how they will approach and complete the assignment, and a time schedule.

**For firms:**

- a) The firm's references regarding similar studies.
- b) The CV of the experts with their qualifications, experience/references; indicating all past experience in the field of birds species and marine birds species in the Mediterranean Sea, marine environment polices and marine activities.
- c) A methodological note on how they will approach and complete the assignment and a time schedule.

**10.2. Financial proposal**

Financial proposal should be submitted in USD indicating all-inclusive fixed total contract price, supported by a breakdown of costs. The financial proposals in case submitted by a firm, should also include other administrative documents upon request.

**10. Deadlines and submission of proposals**

Proposals must be sent electronically to the following e-mail addresses: [westasia@iucn.org](mailto:westasia@iucn.org), and [Natalia.boulad@iucn.org](mailto:Natalia.boulad@iucn.org) before 22.5.2019.

E-mails should indicate clearly in their subject line the reference of this **“TOR for Atlas of coastal and marine birds Lebanon”**.

Only short listed candidates will be contacted.

Proposals received after this deadline will not be considered.