

## TERMS OF REFERENCE FOR INDIVIDUAL CONTRACTORS/ CONSULTANTS

Title of Assignment	<b>Marine Biodiversity Survey of Palm Island Nature Reserve, Tripoli – Lebanon for the Project “Enhancing socio-ecological climate change resilience of marine and coastal systems in Lebanon.”</b>	
Location	Lebanon	
Duration	<b>10 weeks</b>	
	From: August 17, 2020	To: October 26, 2020

### Background and Justification

Through this project and based on the request of the Ministry of Environment, IUCN will conduct the first Marine Biodiversity Survey for Palm Island Nature Reserve, PINR, to monitor and assess the marine biodiversity and natural habitats in PINR waters. In order to issue an inventory (baseline database) of the marine species and habitats in the marine part of PINR and to provide a procedural guidelines and framework for monitoring of marine and coastal resources and enable judgments / comparable assessments about the condition of features which are consistent between one person and another, and between one site and another. Furthermore this study will also provide a tool for the site manager and benchmark for marine conservation measures to be included in the updated management plan of PINR.

### Scope of Work and Objectives.

Under the direction of Marine Programme Manager, the Team will do the following but not limited to:

1. Literature review of relevant documents on PINR
2. Meet with the Head of PINR's committee to discuss about his priorities regarding biodiversity monitoring in PINR waters
3. Identify parameters, monitoring frequency and responsible organizations in addition to identifying the necessary monitoring equipment and training requirements.
4. Prepare “Conservation objectives” and management objective for key species and habitats, and indicate features and parameters that would reflect favorable condition along the coastline and marine area of Palm Island Nature Reserve.
5. Review and evaluate any existing monitoring program in PINR waters, if available;
6. Identify the consecutive steps (Planning, Site measurement, Reporting results, etc.) that all need to be performed to ensure good quality results in the monitoring programs;
7. Addresses the principles and the procedures for monitoring habitats and species, seawater and bottom sediments quality and physical oceanography features;
8. Identify and list best practice to
9. Conduct an underwater biodiversity assessment and monitoring including but not limited to fish census and habitat survey
10. Sample collection and direct measurement and identification of indicators.
11. Frequency of monitoring / what is the most appropriate method?
12. Precision and accuracy
13. Sampling, statistical data analysis and recording
14. Benthic survey, fish survey, water quality, sediment quality, physical oceanography parameters and conditions.

15. Reference values.
16. Reporting arrangements.
17. Identify the time at which the measurement is conducted/ Period of monitoring;
18. Explain and discuss planning and factors affecting the monitoring process;
19. Identify the present and future needs to strengthen institutional capacity for environmental monitoring within the relevant sector in Tripoli with emphasis on the capacity of PINR and other relevant institutions;
20. Set out the appropriate methods for collecting, managing and exchanging monitoring information using accepted standards so as to facilitate the comparison of results over time and between different localities.
21. The proposed guidance note shall be based on the national laws, regulations and guidelines as well as on the relevant internationally applied principles and guidelines for marine and coastal resources.
22. The guiding notes should therefore, be considered/prepared as a live working document.

### ***Work relationships:***

The Team shall report to IUCN Marine and Coastal Zone Management Unit, Lebanon.

The Team will be required to meet with the Head of Ecosystem Services Department at the Ministry of Environment, and the Head of PINR committee before the fieldwork for briefing and discussion and after the mission to report on the findings briefly before the main dissemination of results.

### **Deliverables**

The team of experts will travel to Tripoli (Lebanon) to conduct the first Marine Survey of PINR and to assess its marine biodiversity; monitor and characterize the marine biodiversity and marine natural habitats in Palm Island Nature Reserve;

With the data collected, the team will prepare a report on PINR marine biodiversity including but not limited to the following; a) an inventory of marine biodiversity species in PINR waters; b) a report on fish biomass, frequency, density, size, and diversity; c) the status of key habitats highlighting the major benthic communities present including the invertebrates, algae and micro-algae; d) recommendations to improve the biodiversity conservation and the management in Palm Island Nature Reserve.

The Team will carry out a training on simple fish and other marine species monitoring technique suitable for the PINR team. The training course will take place in Tripoli.

The team will submit the compilation of the available information and data collected from the field in a form of manual to be used as reference for the team of PINR. This manual will be reviewed and published in partnership with the Ministry of Environment.

<b>Deliverable</b>	<b>Date</b>	<b>Measurable Outputs of the Work Assignment / Quality Control Measures</b>
Deatiled methodology and work plan summarizing and discussing the key species, habitats and ecosystem that will be surveyed and the tools and methods to be used	3 day from contract signature	Well- identified and described report and content.

Marine Biodiversity field work	5 to 7 days in the field on PINR in Mina Tripoli, North Lebanon (date will be confirmed in contract)	5 to 7 days of underwater surveys, photos, videos, samples
One-day training to concerned people from PINR Committee, local experts, divers and other relevant stakeholders on the monitoring techniques and methodology that were used during this mission in PINR and its results	1 day, after the field survey directly in Tripoli if the presence of the International experts is required. If not during the assignment period with only the Local experts.	Quality of Facilitation service to the workshop. Type of knowledge and information prepared and shared at the workshop Feedback from participants
Report on PINR marine biodiversity including but not limited to the following; a) an inventory of marine biodiversity species in PINR waters during the surveys' period, with latest conservation status in the IUCN RedL.; b) a report on fish biomass, density, size, and diversity; and c) the status of key habitats highlighting the major benthic communities present including the invertebrates, algae and micro-algae; d) recommendations to improve the biodiversity conservation and the management in Palm Island Nature Reserve.	4 weeks after the marine survey.	<ul style="list-style-type: none"> <li>- A full inventory of marine species in PINR waters</li> <li>- Highlight the key species and ecosystem present in the area.</li> <li>- Addresses the principles and the procedures for monitoring habitats and species, seawater and bottom sediments quality and physical oceanography features;</li> </ul>
Based on information and data collected from the field, submit a manual on the current status of marine biodiversity of PINR and the recommended procedures and tools for marine monitoring to be used in the future as reference by the team of PINR	6 weeks after the marine survey	<p>Identify and list best practice for;</p> <ul style="list-style-type: none"> <li>➤ Sample collection and direct measurement</li> <li>➤ Frequency of monitoring / What is the most appropriate method.</li> <li>➤ Precision and accuracy</li> <li>➤ Sampling, Data analysis and recording</li> <li>➤ Benthic survey, fish survey, water quality, sediment quality, physical oceanography parameters and conditions.</li> <li>➤ Reference values.</li> <li>➤ Reporting arrangements.</li> </ul>

		Identify Overfishing / Destructive Fishing damages. Identify the location that permits a representative determination of the anthropogenic pressures to the marine/coastal ecosystem i.e. Selection of monitoring location; Identify the time at which the measurement is conducted/ Period of monitoring; Explain and discuss planning and factors affecting the monitoring process; Identify the present and future needs to strengthen institutional capacity for environmental monitoring within the relevant sector in Tripoli with emphasis on the capacity of PINR and other relevant institutions;
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#### Duration and Schedule

The time duration for the implementation of the activities within this assignment starts upon the signature of the contract for a period of 10 weeks and ends no later than October 26, 2020. The field work is tentatively expected to start on August 17, 2020 but not later than September 14, 2020 and the finalisation the reports and all other products should not exceed October 26, 2020

#### Qualifications of Successful Candidate

Team of at least four international and national consultants with relevant scientific careers in the field of Mediterranean study of fish biodiversity, benthic assemblage, Mediterranean marine habitats and ecosystems.

All Team members must be qualified divers to at least 40 meters with valid dive insurance.

Teams with scientific divers experienced in mixed gas diving are favorable.

All Team members must have a minimum of Graduate studies in Marine Biology, Ecology, Environment.

All Team members must submit Personal CV indicating all past experience in the field of Mediterranean Fauna and Flora (experience in Eastern Mediterranean is a plus)

The Team must assign a Team Leader,

The Team Leader will be share contact details and will be contracts focal point.

Brief description of why the Team is the most suitable for the assignment, a methodological note, on how they will approach and complete the assignment.

Teams with previous collaboration experience are favorable.

**Individual applicants will be disregarded.**

### **Payment Schedule**

The Team will submit a financial offer based on Two or Three instalments.

Upon signature of contract with the selected Team, the Team must submit an invoice.

The Team is responsible to submit relevant invoices with the deliverables and payment will be made upon satisfactory completion of each of the deliverables.

### **Logistics Arrangement**

IUCN will provide the following arrangement:

Scuba cylinders and weights

Scuba cylinders Air, Nitrox\* and Mixed Gases Fills

Scuba cylinders for stage decompression\*

On board First Aid Kit and Oxygen

Vessel with support tender for dive operation, with on board water, rehydration salts and meals.

Return Travel for international experts based on economy fair

Local transfer from and to Airport

Accommodation for the Team in Tripoli

DSA based on IUCN Rate for Lebanon

\*Nitrox, Mixed Gas and Decompression Cylinders only for certified divers.

### **Nature of penalty clause in contract**

If the fieldwork, reports and documents are not submitted according to, the deliverables and timeframe stated in this TOR, the payments would be withheld.

IUCN ROWA reserves the right to withhold all or a portion of payment if performance is unsatisfactory, if work/outputs is incomplete, not delivered or for failure to meet deadlines. All materials developed will remain the copyright of IUCN and IUCN will be free to adapt and modify them in the future.

### **How to apply**

Submit CVs of the Team, a strong justification for your application and a financial proposal with a brief methodical note. Also, include the financial proposal for undertaking the assignment. Please, remember, this is an assignment part of project.

Submit to [ziad.samaha@iucn.org](mailto:ziad.samaha@iucn.org) by no longer than March 16, 2020, 13:30 Beirut time. Consider your application unsuccessful if you do not hear from us.

