



TERMS OF REFERENCE (ToR)

Healthy Reefs for Healthy People (HRHP)

Marine Ecology and Spatial Analysis Specialist — Technical Compendium and Spatial Data Aggregation for the Designation of the Mesoamerican Reef Region (MAR) as a Particularly Sensitive Sea Area (PSSA).

Organization	Healthy Reefs for Healthy People (HRHP)
Duration	August – December 12, 2026
Duty Station	Remote

Background

Healthy Reefs for Healthy People (HRHP) is a regional team dedicated to improving the health and resilience of the Mesoamerican Reef (MAR) through science-based conservation, monitoring, and collaborative management. Working alongside partners across Mexico, Belize, Guatemala, and Honduras, HRHP generates and applies scientific information to support effective conservation, sustainable management, and evidence-based decision-making.

HRHP is currently supporting the preparation of the technical document required for the proposed designation of the MAR as a Particularly Sensitive Sea Area (PSSA). A PSSA is a marine area recognized by the International Maritime Organization (IMO) as requiring special protection because of its ecological, socio-economic, or scientific significance and its vulnerability to impacts associated with international shipping.

The preparation of a successful PSSA proposal requires robust scientific evidence demonstrating that the area satisfies the ecological criteria established under the IMO Guidelines. These include, among others, biodiversity, biological productivity, ecological dependency, critical habitat, representativeness, uniqueness, naturalness, and vulnerability.

HRHP and its regional partners have already compiled a substantial amount of scientific information and completed many of the analyses required for the proposal. However, several important information gaps remain that require additional ecological analyses, synthesis of existing information, spatial products, and integration into the technical dossier.

To support this effort, HRHP seeks a consultant with strong analytical skills and experience in marine ecology, spatial analysis, biodiversity informatics, and scientific writing.

Objective of the Consultancy

To support the preparation of the technical dossier for the proposed designation of the Mesoamerican Reef Region as a Particularly Sensitive Sea Area (PSSA), through the compilation, analysis, interpretation, and integration of ecological and supporting information that strengthens the scientific justification for the proposal in accordance with the IMO PSSA Guidelines.

Scope of Work

The consultant will work closely with members of the HRHP technical team throughout the consultancy. This will be a collaborative process involving regular technical meetings, discussion of analytical approaches, review of interim products, and joint development of the final technical dossier.

Specific responsibilities include:

- Review the existing technical dossier, supporting documentation, previous analyses, and reviewer comments.
- Become familiar with identified knowledge gaps and propose analytical approaches to address them.
- Compile, clean, organize, and integrate relevant biological, ecological, and environmental datasets from multiple regional and international sources.
- Conduct spatial and temporal ecological analyses using GIS and R.
- Produce reproducible analytical workflows and properly documented code.
- Generate publication-quality maps, figures, tables, and graphics for inclusion in the technical dossier.
- Integrate biodiversity occurrence records from open-access databases such as OBIS, GBIF, published literature, and other relevant repositories. This activity is focusing only on pelagic species.
- Review and synthesize relevant scientific literature relevant to the ecological justification of the proposed PSSA.
- Review and update the technical sections of the dossier describing methods, analyses, results, and scientific interpretation.
- Contribute to the integration of analytical outputs into the final technical document.

A major component of the consultancy will focus on addressing one of the principal remaining knowledge gaps within the proposal: the location and ecological role of pelagic species and migratory species/routes within the Mesoamerican Reef Region.

This work will include compiling, synthesizing, and analyzing available information on the distribution and seasonal movements of pelagic species, key aggregation areas, and their broader connectivity with reef ecosystems across the region, drawing on existing literature and datasets rather than the generation of new primary data.

The analyses should demonstrate how pelagic ecosystems contribute to the ecological integrity of the Mesoamerican Reef and provide scientific evidence supporting relevant IMO ecological criteria, including biodiversity, biological productivity, critical habitat, ecological dependency, and ecosystem connectivity.

Expected Deliverables

- A comprehensive compilation and review of existing literature, ecological datasets, and supporting documentation relevant to the proposed IMO PSSA guidelines.
- Consolidated and quality-controlled ecological datasets.
- Fully documented R scripts and GIS workflows.
- Spatial and temporal analyses addressing identified knowledge gaps.
- Maps, figures, tables, and graphical products suitable for inclusion in the technical dossier.
- Technical summaries describing analytical methods and findings.
- Comprehensive assessment of pelagic biodiversity, migratory routes and ecological processes relevant to the proposed PSSA.
- Written contributions integrated into the final technical dossier.
- Final analytical package including all supporting documentation and reproducible code.

Tentative Work Plan- Deliverables and Payments

Phase / Activities / Deliverables	Payment %
Phase 1 — Project Familiarization and Technical Review <i>Mid-August – Early September</i>	30%
Activities ● Review the existing technical document. ● Review technical comments and recommendations. ● Become familiar with previous analyses and available datasets, including global repositories and specific publications. ● Identify priority knowledge gaps and fill these gaps with existing published papers, data, and databases with open access (sea turtles, sharks, cetaceans, seagrass, mangroves, among others). ● Integrate existing datasets, including the reef health data to be provided by HRHP. ● Advance in the incorporation of the technical document using information shared by HRHP. Deliverables ● Detailed Work Plan. ● Consolidated analytical databases. ● Review of information gaps and consolidated spatial data. ● Suggested additions/edits of the draft technical document, particularly the first section regarding contextual and ecological importance of the MAR including the previous gaps in information.	
Phase 2 — Spatial Analyses and Technical Integration of Pelagic Species Information <i>Mid-September – Early November</i>	40%
Activities ● Compile regional information on pelagic biodiversity, species occurrences and migratory patterns, movements etc. as they relate to the MAR. ● Conduct priority ecological spatial analyses, with emphasis on IUCN listed threatened and endangered species. ● Analysis of ship routes and marine traffic. ● Produce preliminary maps and figures. ● Draft analytical sections for the technical document. ● Support integration of analytical outputs into the proposal. ● Synthesize available evidence on distribution, seasonal movements, and aggregation areas of pelagic species. ● Evaluate the ecological importance of pelagic species for the Mesoamerican Reef ecosystem. ● Produce maps and analyses demonstrating the contribution of pelagic and migratory species to the scientific justification for the proposed PSSA. Deliverables ● Preliminary analytical products. ● Spatial datasets. ● Draft technical sections. ● Technical assessment of pelagic biodiversity and hotspots. ● Maps, figures, and supporting analyses.	

Phase 3 — Final Integration and Delivery <i>Early November – Early December</i>	30%
Activities • Compilation, review, and quality assessment of existing literature, ecological datasets, and supporting documentation relevant to the proposed IMO PSSA guidelines and integrate all analyses into the final technical dossier. • Revise figures, tables, and supporting documentation. • Address comments from the HRHP technical team. • Submit all analytical products, documentation, and reproducible code to HRHP. Deliverables • Final analytical package. • Completed technical contributions to the PSSA dossier.	

Phase 1 — Project Familiarization and Technical Review

Mid-August – Early-September **Activities**

- Review the existing technical document.
- Review technical comments and recommendations.
- Become familiar with previous analyses and available datasets, including global repositories and specific publications.
- Identify priority knowledge gaps and fill these gaps with existing published papers, data, and databases with open access (sea turtles, sharks, cetaceans, seagrass, mangroves, among others).
- Organize and standardize existing datasets, including the reef health data to be provided by HRHP
- Advance in the incorporation of the technical document using information shared by the HRHP team.

Deliverables

- Detailed Work plan.
- Consolidated analytical databases
- Review of information gaps and consolidated spatial data.
- Suggested additions /edits of the draft technical document, particularly the first section regarding contextual and ecological importance of the MAR including the previous gaps in information.

Phase 2 — Spatial Analyses and Technical Integration of pelagic species information

Mid-September – Early-November **Activities**

- Compile regional information on pelagic biodiversity, species occurrences and migratory patterns, movements etc as they relate to the MAR.
- Conduct priority ecological spatial analyses, with emphasis on IUCN listed threatened and endangered species.
- Analysis of ship routes and marine traffic.
- Produce preliminary maps and figures.
- Draft analytical sections for the technical document.
- Support integration of analytical outputs into the proposal.
- Synthesize available evidence on distribution, seasonal movements, and aggregation areas of pelagic species.
- Evaluate the ecological importance of pelagic species for the Mesoamerican Reef ecosystem.



- Produce maps and analyses demonstrating the contribution of pelagic and migratory species to the scientific justification for the proposed PSSA.

Deliverables

- Preliminary analytical products.
- Spatial datasets.
- Draft technical sections.
- Technical assessment of pelagic biodiversity and hotspots.
- Maps, figures, and supporting analyses.

Phase 3 — Final Integration and Delivery

Early-November – Early-December **Activities**

- Integrate all analyses into the final technical dossier.
- Revise figures, tables, and supporting documentation.
- Address comments from the HRHP technical team.
- Submit all analytical products, documentation, and reproducible code to HRHP.

Deliverables

- Final analytical package.
- Completed technical contributions to the PSSA dossier.

Required Qualifications

Education

- Master's degree in Marine Biology, Marine Ecology, Ecology, Environmental Sciences, Conservation Biology, Geography, or a closely related field.
- Candidates holding a Bachelor's degree with substantial relevant professional experience in marine spatial and ecological analyses will also be considered.

Professional Experience

The successful candidate should demonstrate:

- At least three years of professional experience conducting ecological analyses in marine or coastal environments.
- Experience working with large ecological or biodiversity datasets.
- Experience conducting spatial analyses for marine conservation, ecological assessments, marine spatial planning, or related initiatives.
- Experience contributing to technical reports or scientific documents.

Technical Skills

The consultant should have demonstrated experience with:

- Geographic Information Systems (QGIS and/or ArcGIS).
- R for data management, ecological analyses, spatial analyses, and data visualization.
- Spatial and temporal analyses of ecological datasets.



- Management and integration of large biodiversity databases.
- Biodiversity information platforms including OBIS, GBIF, and other open-access repositories.
- Production of scientific maps and technical figures.

Experience with species distribution analyses, movement ecology, habitat suitability modelling, marine connectivity, pelagic ecology, or marine protected areas will be considered an asset.

Competencies

The consultant should demonstrate:

- Strong quantitative and analytical skills.
- Excellent organizational skills and attention to detail.
- Ability to synthesize complex ecological information into concise technical products.
- Excellent scientific writing skills in English.
- Ability to work independently while collaborating effectively with an interdisciplinary regional team.
- Ability to manage multiple tasks and meet project deadlines.
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Duration

The consultant must complete all work with reviews by December 12, 2026.

Reporting and Coordination

The consultant will report directly to the HRHP technical coordination team and will work closely with designated HRHP staff and regional partners throughout the consultancy. Regular virtual coordination meetings will be held to review progress, discuss analytical approaches, refine products, and ensure the timely completion of deliverables.

The consultancy is expected to be highly collaborative, with the consultant serving as an integral member of the technical team during the preparation of the PSSA proposal.

Financial conditions

1. Professional Fees: The consultant's professional fees will be negotiated and agreed upon based on their qualifications, relevant experience, availability, and the budget to be developed by the consultant.
2. Payment Terms: Payments will include professional fees, applicable taxes, and any banking charges incurred by the consultant. Disbursements will be made according to a pre-established delivery schedule, contingent upon the satisfactory submission and approval of each deliverable, accompanied by the corresponding invoice.

Required documentation

1. Technical proposal: Provide a brief overview of your approach to this consultancy, highlighting your understanding of the MAR Region. Summarize your key strengths and relevant experience, emphasizing your qualifications and ability in supporting the preparation of the technical document to designate the MAR as a PSSA for submission to the IMO.
2. Financial proposal: The financial proposal should include professional fees (daily rate) - no other costs are expected.
3. References: Provide at least three professional references demonstrating prior work experience in the MAR Region and in the topics of these Terms or References.



Application deadline

Send the required documentation to info@healthyreefs.org with the subject line PSSA, by August 21, 2026