

The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)

Terms of Reference (ToR)

Mapping restoration opportunity areas and potential, and building capacities on restoration techniques for of key habitats (mangrove, seagrass and coral reefs) critically important for sustainable fisheries in Red Sea and Gulf of Aden

Under the Project

Sustainable Fishery Development in the Red Sea and Gulf of Aden (SFISH)

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|---------------------------------|--|
| Program/Project Number: | P178143 |
| Activity Code: | 2240-1 |
| Expected duration/period | 7 months through the period of July 2025-February 2026 |
| Estimated effort | 6 person-months |

1. Background

The Regional Organization for Conservation of the Marine Environment of the Red Sea and Gulf of Aden (PERSGA) is an intergovernmental organization established since 1995. PERSGA institutional framework is based on the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah Convention 1982), which joins seven member states, including Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan, and Yemen. Rational use of marine resources and the protection of coastal marine environment from pollution and overexploitation are central objectives of Jeddah Convention (1982) and its derived Regional Protocols and Action Plan. PERSGA runs regional programs and projects that support regional capacities and coordination to achieve these objectives.

The regional project on Sustainable Fisheries Development in the Red Sea and Gulf of Aden (SFISH) is supported by the World Bank and executed by PERSGA in the region. The project development objective aims to strengthen regional collaboration and capacities for management of marine fisheries and aquaculture in the Red Sea and Gulf of Aden region. The SFISH regional component focuses specifically on promoting: a) PERSGA regional database, information system and institutional capacity; b) regional platforms for technical capacity development and coordination mechanisms; and c) stakeholder engagement through effective communication and awareness strategies for sustainable fisheries and aquaculture development.

The Jeddah Convention (1982), its associated protocols/ regional programs components provide the framework for knowledge sharing, joint assessments and collaborative management actions, also to sustain the SFISH project outcomes. Within this framework, PERSGA undertakes regular training and regional joint activities addressing various management aspects of conservation of living marine resource, marine biodiversity, marine pollution, etc. since several years.

Underlining the ecosystem approach, the SFISH project activities were designed to coherently address priority issues in the region, ranging from those related to fisheries and aquaculture governance (e.g. IUU fishing, monitoring, stock assessment, sustainable aquaculture

practices), to those related to protection of key megafauna species (including sharks, marine turtles, seabirds and marine mammals), and restoration of key habitats (including mangrove, seagrass and coral reef) essential for fish. In this framework, the current assignment is aimed to provide technical assistance to promote capacities for enhancing efforts for restoration of mangroves, seagrass and coral reefs as essential habitats for sustainable development and management of fisheries in the region.

2. Scope and objectives of the consultancy assignment

Among the wide range ecosystem services afforded by mangroves, seagrass and coral reefs, several are vital for fisheries, such as providing spawning and nursery grounds, food, shelter, etc. As in many other parts of the world, these habitats have suffered degradation in the RSGA region, owing to multiple local stressors by increasing human activities using coastal and marine space and impacts of climate change. For rebuilding fish stocks, not only effective regulatory measures for sustainable fish harvesting are required, but also successful restoration of their essential mangrove, seagrass and coral reef habitats.

The specific Regional and National Action Plans (RAPs and NAPs) for conservation of mangroves, seagrass and coral reefs, which were developed earlier by PERSGA and member states through SAP project in 2005, have considered restoration of degraded areas as one of the priority actions. However, efforts for restoration of mangroves, seagrass and coral reefs have been limited in the region, though some initiatives were undertaken. Indeed, such coastal restoration efforts are far insignificant, considering the extent of habitat degradation and loss in the region. Main barriers for effective restoration of coastal habitats in the region generally include:

- Major gaps in information on “restoration opportunity areas and potential” in the region, which is strategically needed for knowledge-based restoration plans and long-term programs with well-defined priority areas and targets;
- Absence of comprehensive restoration policies, planning and program frameworks;
- Shortage of sustainable funding to support restoration programs, which could be sensibly tackled through enabling policies and capacities that can efficiently mobilize efforts by various community actors, e.g. private sector and NGOs, rather than the current situation that merely depend on public and government fund.
- Lack of skilled capacities on restoration methods and techniques.

In this context, the current consultancy assignment is aimed to support capacities, focusing on the following objectives considering the specific settings and needs of the RSGA region:

- Mapping restoration opportunity areas and potential for mangroves, seagrass and coral reef in PERSGA region
- Providing guidelines and recommendations for comprehensive policy and program framework for enhanced mangrove, seagrass and coral reefs restoration in the region
- Providing technical guidelines and training to build capacity of a cohort of national specialists/ practitioners on restoration methods and techniques tailored to the region.

3. Tasks and responsibilities of the consultant

To achieve the above objectives, the consultant will work directly with the Project Coordination Unit “PCU” and in close collaboration with regional experts at PERSGA and national specialists from PERSGA member states to undertake the following tasks:

Task (1) Mapping restoration opportunity areas and potential for mangroves, seagrass and coral reefs as critical habitats for fisheries in the Red Sea and Gulf of Aden:

The consultant will undertake review to synthesize specific information for:

- Reviewing existing national and regional guidelines and providing recommendations for promoting restoration policy and program frameworks, based on identified needs through the assessment.
- Take stock of ongoing and recent ecosystem restoration activities in the RSGA region and identify lessons learnt.
- Mapping restoration opportunity areas and potential for mangroves, seagrass and coral reefs in the PERSGA countries covered by the mapping assessment, including Djibouti, Egypt (Red Sea coast), Jordan, Somalia (Gulf of Aden coast), Sudan and Yemen.
- Identifying training needs to assist building capacities for application of the above proposed guidelines and restoration methods,

The review approach and analysis will be based on various available sources. These will include, mainly, literature available on the subjects utilizing relevant PERSGA work and documents and other similar works in the region (e.g. World Bank ecosystem mapping study in progress), along with available literature from global datasets and information, case studies from the region and other regions on restoration programs/ projects for these habitats.

In identifying restoration opportunity areas and potential, the consultant will customize approach and criteria based on available resources, e.g. A guide to the Restoration Opportunities Assessment Methodology (ROAM), developed by WRI and IUCN (2011)¹. It is also required to undertake maximum consultation possible with experts and key informants in the region, so the consultant is expected to develop and use structured survey questionnaire/guides, and carry out visits to collect information and have regional consultation meetings with stakeholders in charge of conservation and restoration of the subject habitats in the region, in arrangements with PERSGA.

The consultant will also need to utilize updated remote sensing data and satellite imagery in defining and characterizing restoration opportunity areas to be recommended. This study should build on the regional ecosystem assessment, which is being carried out by the World Bank. The regional assessment has prepared geospatial maps for the mangroves and seagrass ecosystems for four RSGA countries (Egypt, Djibouti, Jordan and Yemen). Coral reef ecosystems have also been mapped as part of the seafloor mapping using earth observation systems. The geospatial data will be provided by the PERSGA Secretariat.

Although maps, literature and maximum consultation will be used to identify restoration opportunity areas, it is necessary that a ground-truthing exercise is carried out to ensure that the proposed areas are appropriate, and will have positive impacts targeted for biodiversity, ecosystem service delivery, benefits to local communities, etc., and to exclude undesirable impacts, and provide specific recommendations to confirm that unintended negative consequences are to be avoided. The consulting firm should visit at least the highest rated site for each ecosystem (mangrove, seagrass, and coral reef ecosystems). In this connection the firm may need to consider having local expert represented in the team for each PERSGA country covered by the study, including Djibouti, Egypt (Red Sea), Jordan, Somalia (Gulf of Aden), Sudan and Yemen.

¹ <https://portals.iucn.org/library/sites/library/files/documents/2014-030.pdf>

For providing required guidance and recommendations on promoting restoration policy and program framework, the assessment would take into account, for example, how legal and policy instruments can assert that restoration part a suite of management options and tools for conservation management and sustainability, and that the needs for/ benefits of restoration of mangroves, seagrass and coral reef areas can be anchored in policy instruments, considering regional and national policies and decision-making frameworks. This is important especially when considering the wider context of addressing the causes of decline, protect from impacts, define user responsibility, etc. It is also strategically important to construe legal and policy instruments for restoration in undertaking environmental impact assessments, setting compensation for damage and negotiating value of these ecosystems as natural assets. Additionally, framework policies and programs should enable incentive-based and other encouraging instruments to mobilize efforts by various actors (e.g. private sector, community societies and NGOs, etc.), which could profoundly enhance and sustain restoration efforts programs in the future, compared to current situations where restoration efforts solely depend on the limited government resources or sporadic projects by development assistance.

With regard to identifying technical methods and training needs on restoration approaches and tools, the required guidelines should be tailored to suit best possible approaches and tools that can be standardized and applied in the Red Sea and Gulf of Aden, considering the particular biological characteristics of the species, ecological limits, conservation issues, cost-effectiveness aspects, beneficiaries, applicability, technology, etc. in the region.

Task (2) Develop/ update technical guidelines and conduct training on restoration techniques for mangroves, seagrass and coral reefs in PERSGA region

The consultant will prepare a consolidated regional guide document, including both policy and technical guidelines for restoration methods (manuals) suitable with the region, considering ecological settings, species, local knowledge, stakeholders, capacity, etc., including the three habitats indicated above. For mangroves, PERSGA has previously developed regional manual on restoration techniques (in 2010). The consultant may revise this manual to update noteworthy proceeds in the approaches and knowledge reported. For coral reefs and seagrass, the consultant will need to develop new regional restoration manuals, customized specifically for the region, as explained above.

For each habitat the guideline on restoration techniques and practice should generally provide, but not limited to, scientific background and considerations, simple description of the restoration methodologies and tactics, such as site identification, best practices, monitoring, propagation, nursery techniques, transplanting and relocation, etc.

Finally, the consultant will facilitate **two regional training workshops** on restoration approaches and techniques for 20-25 candidate national specialists from PERSGA member states to be organized in arrangement with PERSGA.

- The first workshop will comprise 5-days training program on restoration techniques of mangrove and seagrass.
- The second workshop will comprise 3-days training program on restoration of coral reefs.

Each training program will be based on the above guideline and method as tailored for the region, which should be designed in suitable modules for the training purpose, preferably to follow Training of Trainers approach, as the participants will be sourced as cohort for future

training of other practitioners and beneficiaries at national level in their respective member states in the future.

4. Key Deliverables and Tentative Timing

| # | Deliverable and description | Timeframe |
|---|---|-------------------------------|
| 1 | Inception report: includes a summary of the context and work plan, the scope of the work, and capacity building work; approach and plan to be used, taking into consideration different stakeholders. The report will also initially identify the analysis <u>key information needs for criteria</u> required in: a) defining restoration opportunity areas (such as role as critical fishery habitat, e.g. organism life history, and other macroecological considerations, such as habitat availability and recovery targets, occupancy–abundance relationships, effects on individual performance, habitat quality, habitat quantity- metapopulation factors, populations critical- habitat required to achieve the recovery target, etc.; b) identifying policy and program frameworks required, to provide recommendations for improvement; and c) selection of restoration methods suitable for the region to be proposed by the assessment | 3 weeks from contract signing |
| 3 | Draft technical report fulfilling Task 1 described in section 3 above, including: a) mapped “restoration opportunity areas” potential for mangroves, seagrass and coral reefs in the Red Sea and Gulf of Aden; draft proposed policy and technical guidelines suitable for the region; c) Training needs to assist building capacities for application of the proposed guidelines and restoration methods, | 16 weeks from contract |
| 4 | Final technical report: considering review remarks by PERSGA, World Bank and other regional experts to be referred to by PERSGA | 20 weeks from contract |
| 5 | Finalize a consolidated document, including regional guidelines and restoration techniques of mangrove, seagrass and coral reefs in RSGA region, including their design as training modules to be applied in the training programs. The guidelines will give recommendations for promoting restoration policy and program frameworks, based on identified needs through the review and analysis, in addition to restoration methods suitable for the region, considering ecological settings, species, local knowledge, stakeholders, capacity, etc., including the three habitats indicated above; | 28 weeks from contract |
| 6 | Conducting two regional training workshops fulfilling Task (2) described in section 3 above, and submit final consultancy report, including summary of all consultancy outputs and recommendations | 32 weeks from contract |

5. Duty station and duration

Duty station: Home based with in-situ field visits to the region for data collection, consultation and provision of technical training. The consultancy will be completed over 7 months, during which the consultant is expected to utilize actual 6 person-months.

6. Qualification, Skills and Experience

The following qualifications and experience eligibility criteria are required to be met by the consultancy firm team/staff to be employed in undertaking the assignment.

A. Institutional Qualifications of the Firm

1. Corporate Experience

- Minimum of **10 years** of verifiable experience in **environmental consultancy**, particularly in:
 - Ecosystem assessments
 - Marine and coastal spatial planning
 - Coastal and marine ecosystem management
 - Ecosystem-based management and policy advisory
- At least **two completed projects**, including:
 - One project related to **marine and coastal ecosystem assessment**
 - One project related to **coastal ecosystem restoration**

2. Geographical and Sectoral Relevance

- Preferable experience in the **Red Sea and Gulf of Aden region**
- Proven history of collaboration with **international or regional organizations**

3. Operational Capacity

- Annual turnover of at least **USD 500,000** in environmental consultancy over the past **two years**
- Ability to interact effectively with **government institutions, civil society, academia, development partners, and the private sector**

4. Consortiums (if applicable)

- Firms may form a **consortium**, but only the **lead firm** should submit the proposal
- Multiple submissions from consortium members will lead to disqualification

B. Technical Team Composition and Requirements

The firm must commit to deploying a team with the following structure and expertise:

1. Team Leader (Marine Ecologist/Expert)

- Over **15 years of experience**, with at least **7 relevant projects** in:
 - Coastal and marine ecosystem assessments
 - Restoration policy and strategy development
- Preferably holds a **PhD**, minimum requirement is a **Master's degree**

2. Thematic Marine Ecologists

- Specialists in **coral reefs, mangroves, and seagrasses**
- At least **10 years of experience**, with a minimum of **3 years** as permanent experts in relevant projects
- Sound understanding of **restoration principles, methods, and science**

3. Remote Sensing/GIS Specialist

- Documented expertise in **analysis and interpretation of coastal ecosystem imagery**
- Experience in **habitat mapping and spatial data management**

4. Local Experts

- At least **one local expert per country** (Djibouti, Egypt, Jordan, Somalia, Sudan, and Yemen)
- Familiar with national policies and ecosystem characteristics

C. Cross-Cutting Competencies of the Team

- All team members must hold at least a **Master’s degree** or equivalent in marine/coastal sciences or related fields
- Proficiency in **habitat restoration tools and techniques**
- Strong knowledge of **international/regional legal and policy frameworks** for conservation and restoration
- Proven ability to deliver **high-quality consultancy outputs** aligned with **international standards**
- Mandatory fluency in **English**; proficiency in **Arabic and/or French** is an advantage
- Strong teamwork, interpersonal skills, and capacity to work **independently and collaboratively**

D. Submission Requirements (Documents to be Included with the Application)

| Requirement | Supporting Document |
|---|---|
| Proof of corporate experience | Company profile; list of past projects with summaries, client references, and contact details |
| Proof of financial capacity | Audited financial statements or bank statements showing annual turnover of USD 500,000+ |
| Proof of project relevance | Project completion certificates and technical reports from the last 3 years |
| Technical and managerial capability | Organizational chart, list of full-time staff, and description of internal systems |
| Core business and years of operation | Certificate of incorporation; company registration/license |
| Team composition and qualifications | CVs of proposed experts; summary table of team roles, experience, and qualifications |
| Language proficiency | Indicate in CVs and/or include certifications if available |
| Consortium arrangement (if applicable) | Consortium agreement; roles and responsibilities of each partner |
| Experience in Red Sea and Gulf of Aden | Relevant project summaries; letters of reference from regional partners or clients |
| International/regional consultancy experience | References and contracts with international/regional bodies |

7. Application procedure and closing date

- Interested firm applicant should submit Expression of Interest (EOI) letter and firm profile (considering above indicated criteria and key staff CVs) to the following email address: **sourcing@persga.org**
- Applications deadline is extended to be received no later than **5th July 2025**

EOI letter should indicate the consultancy title and relevant Activity Code mentioned above.