I. BACKGROUND

The Arafura and Timor Seas (ATS) is part of the North Australian Shelf large marine ecosystem (LME), which is a tropical sea lying between the Pacific and Indian Oceans and extending from the Timor Sea to the Torres Strait and including the Arafura Sea and Gulf of Carpentaria. The region is adjacent to the Coral Triangle, which hosts the world’s highest marine biodiversity and contains some of the most pristine and highly threatened coastal and marine ecosystems. At the regional scale, the ecosystems of the ATS play an important economic and ecological role in the littoral nations bordering the Arafura and Timor Sea: Indonesia, Timor-Leste, Australia, and Papua New Guinea.

The marine environment in the ATS region is in serious decline, primarily as a result of overharvesting and other direct and indirect impacts of anthropogenic stresses and global climatic changes. Fisheries in the ATS region represent an extremely complex productive, socioeconomic sector, with multiple actors, target species sought, and technology used. The main characteristics of depletion of shared ATS transboundary stocks by fishery were assessed as part of the ATS transboundary diagnostic analysis (TDA) in 2012. In addition to climate change, unsustainable harvesting, illegal unreported unregulated (IUU) fishing, and bycatch are having significant impacts on the populations of key marine species in the ATS region, particularly globally threatened coastal marine megafauna including migratory, rare, and threatened species of turtles, dugongs, seabirds/shorebirds, sea snakes, cetaceans, sharks and rays. Lastly, potential sources of marine pollution in the ATS region include marine debris, marine-based pollution from oil and gas activities, as well as waste from fishing and shipping vessels.

ATSEA 2 is the 2nd phase of the GEF-financed, UNDP-supported ATSEA program, building upon the foundational results realized in the first phase of the ATSEA program, covering Indonesia, Timor Leste, Papua New Guinea, and Australia. This 5-year project will support implementation of the following governance and environmental objectives of the ATS regional Strategic Action Program: (i) Strengthening of ATS regional governance; (ii) Recovering and sustaining fisheries; (iii) Restoring degraded habitats for sustainable provision of ecosystem services; (iv) Reducing land-based and marine sources of pollution; (v) Protecting key marine species; and (vi) Adaptation to the impacts of climate change.

Marine and land-based pollution have caused serious decline in the ATS region. Pollution impacts are largely attributed to poor catchment practices, mining activities, offshore oil and gas exploration and exploitation, and the effects of fisheries, including marine debris, which partly consists of discarded fishing nets and other fishing gear. River system siltation, primarily from deforestation is causing sediment dispersion to inshore coastal marine zones. Fertilizers and pesticides being used on farms within watershed catchments are also carried down to coastal areas, disrupting the nutrient cycle and introducing persistent toxic

1 The Coral Triangle is a marine area located in the western Pacific Ocean, and including the waters of Indonesia, Malaysia, the Philippines, Papua New Guinea, Timor-Leste and Solomon Islands.
substances to benthic communities in estuaries and inshore ecosystems, subsequently distressing biodiversity in these areas \(^2\). Human impacts can be expected to grow significantly with population growth and resultant increases in economic activities in the ATS. Industrial development, tourism, and urbanization can exacerbate the pollution of coastal waters from untreated domestic and industrial waste. On the objective of reducing marine and land-based pollution, the project will complete a regional analysis of pollution hotspots that will provide a practical framework for decision makers to prioritize pollution reduction strategies and initiatives. The project will also include activities aimed at strengthening regional and local oil spill early warning systems and capacities.

### II. SCOPE OF WORK, DUTIES AND RESPONSIBILITIES, AND DELIVERABLES

**Scope of Work**

The Regional Project Management Unit and Indonesian National Coordination Unit (NCU) of ATSEA-2 are seeking to engage a pollution expert to undertake a marine and land-based pollution hotspot analysis for the Indonesia portion of the ATS region and building on that to carry out a regional assessment of marine and land-based pollution hotspots through country studies from both Indonesia and Timor-Leste aggregated at the LME level.

**Duties and Responsibilities**

**Scope of work 1**: Undertaking a marine and land-based pollution hotspot analysis for Indonesia:

1. To analyze and identify marine and land-based pollution hotspots in the Indonesia portion of the ATS region, including the number of incidences and the potential bio-ecological, economic, and social impacts and losses due to pollution;
2. To analyze and evaluate the potential bio-ecological, economic, and social impacts and losses due to marine and land-based pollution, including oil spills in Rote Ndao District;
3. To identify the level of understanding and awareness of key stakeholders to address and manage point and non-point sources of pollution in Rote Ndao District;
4. To conduct gap analysis of national and local regulations to control marine and land-based pollution.
5. To present the analysis results to Indonesia NCU/NPB?

**Scope of work 2**: Carrying out a regional assessment of marine and land-based pollution hotspot for the ATS region:

1. To collate study results of marine and land-based pollution hotspots from ATS countries, especially from Indonesia and Timor-Leste;
2. To produce a regional analysis of marine and land-based pollution hotspots in the ATS region, including the number of incidences and the potential bio-ecological, economic, and social impacts and losses due to pollution;
3. To develop recommendations on how to address and manage point and non-point sources of pollution at LME level, including strengthening preparedness and response mechanisms to oil spills and other pollution incidents;
4. To present the analysis results in the RSC/SPF meeting 2020.

**Scope of work 3**: Final reports

1. Finalize reports based on all inputs and comments gathered and submit the reports in English;
2. Submit a file storage (i.e. USB) containing soft copy of editable version of final reports, all presentations, photos and videos, and all data and calculations.

**Expected Approach and Ethical Guidelines**

The consultant will be expected to observe full ethical guideline and approach during the field work (specifically) and throughout the process (generally) which will be designed and agreed during the methodology design stage. It is important for the consultant/company to keep in mind the following:

- Ensure that both the formal and informal environmental and socio-economic mechanisms are examined;
- Be aware of conflicts and gender sensitivities and adopt the principles and practices of participatory dialogue for all consultations;

\(^2\) ATSEA transboundary diagnostic analysis, 2012
- Respect local cultures and values and ensure behavior of research team do not violate norms and values;
- Ensure adequate safety to those conducting and attending the consultations and other activities of the process;
- Ensure objectivity and independence by conducting the consultations in an impartial manner;
- Work with relevant government to identify participants for the consultations; and
- Pay attention to vulnerable groups throughout the process.

**Expected Outputs and deliverables**

The specific outputs/deliverables expected from the service company are the following:

<table>
<thead>
<tr>
<th>Scope of work</th>
<th>Outputs &amp; Deliverables</th>
<th>Estimated no. of working day</th>
<th>Completion deadline</th>
<th>Payment amount</th>
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<tbody>
<tr>
<td>1</td>
<td>• Detailed work plan and budget for undertaking marine and land-based pollution hotspots analysis for Indonesia and ATS region. The work plan indicators should be harmonized with M&amp;E indicators</td>
<td>10</td>
<td>1 Aug 2020</td>
<td>30%</td>
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<td>• Preliminary report of marine and land-based pollution hotspot analysis in the Indonesia portion of the ATS region based on desktop study</td>
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<td>• Survey guideline for mapping marine and land-based pollution sources; measuring biocological, economic, and social impacts and losses; and measuring stakeholder’s awareness level in Rote Ndao District, Indonesia</td>
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<td><strong>Note:</strong> Due to COVID-19 and travel restriction, to carry out Scope of Work 1, consultant might have to work with local team who will carry out the survey in Rote Ndao District. Thus, the consultant is requested to develop survey guideline for this local team. The local team will be formed by Indonesian NCU following consultant’s suggestions/requirements. The survey results will be analysed by the consultant as part of his/her outputs and deliverables.</td>
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| 1 & 2         | • Field report on marine and land-based pollution sources and identified level of understanding and awareness from key stakeholders to manage and reduce marine and land-based pollution in Rote Ndao District, Indonesia                                                                                                                                                      | 40                            | 1 Nov 2020        | 40%              |
|               | • Report on gap analysis of national and local regulations to control marine and land-based pollution in Indonesia                                                                                                                                                                                                                        |                               |                    |                  |
|               | • Presentation of results of hotspot analysis for Indonesia to the NCU/INPB (Note: Can be done virtually if COVID-19 and travel restriction still persist)                                                                                                                                                                                   |                               |                    |                  |
|               | • Preliminary report of marine and land-based pollution hotspot analysis in the ATS region, incorporating studies from Indonesia and Timor-Leste                                                                                                                                                                                                 |                               |                    |                  |
|               | • Slides of preliminary results of marine and land-based pollution hotspot analysis in the ATS region to be presented in RSC/SPF meeting                                                                                                                                                                                                        |                               |                    |                  |
### 4. WORKING ARRANGEMENTS

**Institutional Arrangement**
The consultant will be reporting to Regional Project Manager and Indonesian NCU of ATSEA-2 in seeking approval and acceptance of the above-mentioned outputs.

**Duration of the Work**
Expected duration of work is from July – December 2020 spread over 70 working days.

**Duty Station**
The IC will be home based with regular coordination with Regional Project Manager, and National Coordination Units (NCUs) in Jakarta and Dili.

**Travel Plan**
The Consultant will be requested to travel to Bali, Jakarta, Rote Ndao District, and Dili to do the tasks, especially assessment, data collection, and national consultation with National Project Boards. Travel, other coordination and data collection costs will be separately borne by the RPMU and Indonesian NCU.

### 5. REQUIREMENTS FOR EXPERIENCE AND QUALIFICATIONS

**Academic qualifications**
- Advanced university degree (Master's degree or equivalent, PhD preferred) in pollution management, natural resource management, environmental science, or other related fields.

**Minimum experience requirement**
- At least 7 years of relevant experience in relevant works of marine and/or land-based pollution, marine debris, oil spill response or related field;
- Good knowledge and experience in the following areas: environmental impact assessment, environmental economics, and ecosystem valuation;
- Technical skills on using remote sensing, GIS, and modelling to conduct spatial and temporal analysis;
- Knowledge on laws and regulations for pollution management, especially in the ATS region;
- Knowledge on knowledge, attitude, and perspective and/or awareness survey;
- Ability to translate scientific climate information into policy and practical guidance;
- Cultural sensitivity to work in multicultural, multi-ethnic environment;
- Experience in producing high quality reports;
- High motivation and ability to work and deliver under tight deadlines;
- Able to work independently with little or no supervision

**Language requirement:**
- Fluency in English with excellent written communication skills, and strong experience writing reports is required.
- Ability to speak Bahasa is desirable and knowledge on Portuguese and/or Tetum would be an asset.

**Competencies and special skills requirement**
- Strong leadership, coordination and good communication skills;
- Strong analytical, reporting and writing skills;
- Openness to change and ability to receive/integrate feedback;
- Ability to plan, organize, implement and report on work;
- Ability to work under pressure and tight deadlines;
- Proficiency in the use of office IT applications and internet in conducting research;
- Good presentation and facilitation skills;
- Demonstrates integrity and ethical standards;
- Positive, constructive attitude to work;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Strong field work experience on climate change adaptation and mitigation and strong communication skills in community and other relevant stakeholders is preferred.

**Budget proposal:**
Bidders should describe the budget plan based on expected outputs, clearly showing logical framework or activity plan to achieve outputs.

### 6. EVALUATION METHOD AND CRITERIA

**Cumulative analysis**

When using this weighted scoring method, the award of the contract should be made to the individual consultant whose offer has been evaluated and determined as:

a) responsive/compliant/acceptable, and

b) Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

* Technical Criteria weight; 70
* Financial Criteria weight; 30

Only candidates obtaining a minimum of 70 point would be considered for the Financial Evaluation.

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<tr>
<th>Criteria A: Qualification Requirements as per TOR:</th>
<th>Weight</th>
<th>Maximum Point</th>
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<tr>
<td>Technical</td>
<td>70</td>
<td>100</td>
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1. Criteria 1: Advanced university degree (Master's degree or equivalent, PhD preferred) in pollution management, natural resource management, environmental science, or other related fields;
2. Criteria 2: At least 7 years of relevant experience in relevant works of marine and/or land-based pollution, marine debris, oil spill response or related field;
3. Criteria 3: Good knowledge and experience in the following areas: environmental impact assessment, environmental economics, and ecosystem valuation;
4. Criteria 4: Technical skills on using remote sensing, GIS, and modelling to conduct spatial and temporal analysis;
5. Criteria 5: Knowledge on laws and regulations for pollution management, especially in the ATS region;
6. Criteria 6: Knowledge on knowledge, attitude, and perspective and/or awareness survey;
7. Criteria 7: Experience in producing high quality reports
Criteria B: Brief Description of Approach to Assignment:

1. Understand the task and applies a methodology appropriate for the task as well as strategy in a coherent manner
2. Important aspects of the task addressed clearly and in sufficient detail
3. Logical, realistic planning for efficient project implementation

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<td>project implementation</td>
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7. SUBMISSION OF TENDER

Applicants are requested to submit:

1. Duly accomplished Letter of Confirmation of Interest and Availability;
2. Detailed Curriculum Vitae, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate
3. Brief description of why the individual considers him/herself as the most suitable for the assignment,
4. A description of the methodology, on how they will approach and complete the assignment.
5. Financial Proposal that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs.

Applicants are requested to submit the tender and requirements via email to recruitment@pemsea.org with copy to infoatsea@pemsea.org. Kindly indicate the vacancy reference number and title of requirement when applying (in the subject line) by email.

Additional Considerations

Bid applications received after the closing date (June 15, 2020) will not be considered. Only those candidates that are shortlisted will be notified. Applicants from the ATSEA region are highly preferred.

For more information on ATSEA and ATSEA2, please visit http://diktas.iwlearn.org/ATSEA; www.id.undp.org; and www.pemsea.org