

TERMS OF REFERENCE FOR CONTRACTORS/ CONSULTANTS

Title of Assignment	Baseline Assessment at ALUla County: 1. A Field Pedological work, Soil survey, and Georeferenced Soil Database Development; 2. Vegetation survey; 3. Ecosystems mapping.	
Location	Kingdom of Saudi Arabia (KSA)-Alula County	
Project name	Strategy and the execution plan of ecosystem restoration and agroforestry for Alula	
Timeframe	From: 15th September 2023	To: 30th November 2023

Background

The International Union for the Conservation of Nature (IUCN) is the world’s leading conservation membership union established over 70 years ago, and composed of over 1,400 member-based organizations of both government and civil society organizations as well more than 18,000 experts. The union’s mission is to encourage and assist societies to conserve the integrity and diversity of nature and ensure that any use of natural resources is equitable and ecologically sustainable. Through its Regional Office for West Asia (ROWA) and related global programs, IUCN is seeking to strengthen its presence in Saudi Arabia, particularly in Alula Country on initiatives that align with IUCN’s mission and priorities.

ALUla has a unique natural environment of diverse terrains and ecosystems that for centuries have combined a wealth of biodiversity, resilient ecosystems, and a valuable cultural heritage. However, during the last decades, the ecosystems have faced a significant degree of degradation and natural resources deterioration as a result of frequent drought, overgrazing, wood cutting, unorganized arid land cultivation, and other human activities. For this purpose, the Royal Commission for AlUla (RCU) was established to protect and safeguard AlUla, a region of outstanding natural and cultural significance in North-West Saudi Arabia. The RCU is embarking on a long-term master plan to develop and deliver a sensitive and sustainable transformation of the region. The rich flora of AlUla may provide an opportunity for the re-establishment of healthy sustainable ecosystems under protection conditions. However, as large areas of the nature reserves and beyond the protected lands are under severe degradation; protection only wouldn’t be enough to rehabilitate the habitats and restore the ecosystems. Hence, ecological restoration practices will be widely implemented within and beyond the nature reserves. The ecosystem restoration will require developing policy and guidelines, building technical capacity, and implementing a restoration plan to restore degraded ecosystems.

The RCU’s goal is also to reaffirm AlUla as one of the country’s and region’s most important archaeological and cultural destinations while preparing to welcome local and around-the-world visitors. RCU is committed to preserving the natural beauty of AlUla’s landscapes and rehabilitating rangeland and re-establishing the rich diversity of plant life and wildlife.

Context of the project

IUCN ROWA is currently implementing a new project in Saudi Arabia-ALUla County entitled Strategy and execution plan of ecosystem restoration and Agroforestry for AIUla in the Kingdom of Saudi Arabia. The main purpose of the strategy and the action plan is to ensure the good and successful implementation of ecosystem restoration projects in line with RCU's overall vision, mission, and strategic objectives. The project will begin by conducting an analysis of the current situation, making use of the available data and outputs from the executed and current projects, and implementing additional baseline ecological surveys in targeted areas to identify the priority areas for the protection of important flora and priority degraded rangeland and ecosystems areas for rehabilitation and ecological restoration. The work will be implemented and conducted under the supervision of the IUCN's regional office for West Asia- Drylands, Livelihoods and Gender program, thus, IUCN-ROWA will hire a qualified consultant/organization for the achievement of the project deliverables, goals, and objectives.

Furthermore, detailed analyses of the economic valuation of ecosystem services and the cost of ecosystem degradation and restoration in AIUla will be implemented. The ecosystem restoration and afforestation KPIs in AIUla will be developed and to be linked to Vision 2030, Saudi Green Initiative, and RCU strategic objectives and KPIs. In addition, strategic guidelines and principles action plan, and governance and funding model of the ecological restoration and afforestation will be prepared.

To ensure successful implementation, IUCN-ROWA and its consultants will ensure effective stakeholder engagement, including collaboration with the RCU, local communities, government agencies, and environmental organizations.

Site Description:

AIUla is located 1,100km from Riyadh in northwest Saudi Arabia. AIUla is a place of extraordinary natural and human heritage. The vast area of AIUa, covering 22,561km², includes a lush oasis valley, towering sandstone mountains, and ancient cultural heritage sites dating back thousands of years.

AIUla has a unique natural environment of diverse terrains and ecosystems that have combined a wealth of biodiversity, resilient ecosystems, and a valuable cultural heritage for centuries. Six nature reserves with a total area of about 13.000 km² have been created in AIUla to conserve the biodiversity and natural heritage of AIUla, following international best practice management guidelines (see Table 1).

Scope of Work (Baseline Assessment- Ecosystem in the targeted areas at AIUla County)

IUCN – ROWA is seeking a qualified consultant to support project management to provide expertise and support in developing a comprehensive ecosystem restoration and agroforestry strategy for the AIUla region. The objective of this consultancy is to conduct; 1. a Field Pedological work, Soil survey, and georeferenced soil database development; 2. Vegetation survey; and 3. Ecosystems mapping. The consultant will employ high-standard methods to carry out the baseline assessment and collaborate with accredited laboratories to ensure accurate soil analysis. All deliverables, including soil maps, databases, flora databases, plant checklists, analysis reports, and thematic maps, should be compatible with the RCU-GIS system requirements. The consultant will be based in Saudi Arabia with frequent travel to the Regional Office based in Amman, Jordan.

The work entails regular interactions with peers from national administrations, particularly the Royal Commission for AlUla. The consultant will be working collaboratively with the project manager/ Drylands, Livelihood, and Gender Programme. The work requires travel to the Saudi Arabia-AlUla region.

Table 1 AlUla Nature Reserves

No.	Site Name	Area	General Description
1	Sharaan Nature Reserve	1600 Km ²	It represents a typical natural landscape of the AlUla area, which is shaped by sandstone massif erosion that forms a complex network of valleys, gorges, and canyons.
2	Harrat Uwayrid	4680 Km ²	Large discrete Harrat landscape – a landscape shaped by vulcanism and a key watershed, monumental sandstone margins, perpetual springs, and wet/damp wadis.
3	Harrat Alzabin	1677 Km ²	The second largest volcanic harrat, a key watershed, and a Key future component of the much larger AlUla National Park, the Arabian Gazelle are still present, but in small numbers.
4	AlGhrameel	2115 Km ²	Diverse desert steppe habitat mosaic, beautiful, outlandish, and varied rock formations.
5	Wadi Nakhlah	2427 Km ²	Wide wadis encompassed by monumental butte and column rock formations and converging into the main Wadi Nakhlah, Castellated rock complexes comprising rock towers and pillars along upper wadi sections.
6	Harrat Khaybar	600 Km ²	Wide range of volcanic rock types and distinctive terrain, have been formed over thousands of years. The distinctive shape of the harrat is the result of a massive explosion that emitted gases and ash containing silicon.

The consultant will be based in Saudi Arabia with frequent travel to the Regional office based in Amman, Jordan. The following assessments must be completed by the consultant professionally and timely:

Field Pedological Work and Soil Survey

1. Field Pedological Work and Soil Survey

- Conduct field pedological work and soil surveys in the targeted areas of AlUla.
- Employ recognized and appropriate techniques for soil sampling to ensure representative data collection.
- Determine the spatial distribution of soil types, considering relevant factors such as land use, topography, and vegetation cover.
- Identify and document soil characteristics, including texture, structure, color, and depth.

- Record observations related to soil erosion, compaction, and other degradation indicators.

2. Soil Analysis

- Collaborate with accredited laboratories to perform physical and chemical analysis of soil samples collected during the fieldwork.
- Analyse soil properties such as pH, organic matter content, nutrient levels, and particle size distribution.
- Ensure that the analysis methods employed adhere to recognized standards and provide reliable data.

3. Georeferenced Soil Database

- Develop a comprehensive georeferenced soil database for the surveyed sites in AIUla.
- Organise the collected data in a structured manner, linking soil properties to specific geographic locations.
- Utilise appropriate software and techniques to ensure accurate spatial representation of the soil information.
- Ensure compatibility of the soil database with the RCU-GIS system requirements.

4. Thematic Maps

- Generate thematic maps based on the collected data, highlighting key indicators of soil quality and degradation.
- Create maps illustrating carbon content, erosion susceptibility, and potential for carbon sequestration.
- Ensure that the thematic maps are visually clear, informative, and suitable for integration into the RCU-GIS system.

Vegetation survey

- Conduct a detailed vegetation survey in the targeted areas of AIUla.
- Utilise a skilled team with expertise in vegetation survey techniques.
- Create georeferenced databases for flora to accurately map the inventoried areas.
- Develop GIS layers maps based on the collected data and georeferenced databases.
- Produce a flora database that encompasses all relevant information gathered during the
- Generate plant community maps to identify different vegetation types and their distribution patterns.
- Identify and compile a list of native plant species that are of interest for ecological restoration purposes.
- Ensure that all deliverables are compatible with the RCU-GIS system requirements.

The Ecosystem in Targeted Areas at AIUla: Habitat Diversity, Mapping, and Land Degradation Assessment

1. Baseline Assessment

- Identify and document the diversity of habitats in the targeted areas at AIUla.
- Conduct habitat mapping using GIS technology to determine the distribution and extent of different habitats.

- Assess the vegetation cover in the study area, analysing its composition and extent.
- Evaluate the levels of land and vegetation degradation, identifying areas requiring restoration efforts.
- Analyse the functioning of the ecosystem in the targeted areas.

2. Prioritization and Recommendations:

- Prioritise zones based on their ecological importance, restoration needs, potential for landscaping, and relevance to ecotourism, and provide recommendations for conservation, restoration, and sustainable management practices in each prioritized zone.

- **GIS Mapping:**

- Generate GIS maps compatible with the RCU-GIS system, incorporating functional habitats, vegetation cover, and land degradation levels.
- Ensure the accuracy and validity of the generated maps through standardized scientific approaches.

- **Data Collection and Analysis:**

- Utilise very high-resolution remote sensing imagery (50 cm or less) combined with field surveys and ground reference data.
- Analyse and map vegetation communities, soils, land degradation, and other ecological parameters.

Deliverables

For the implementation of this consultancy, the consultant will be responsible for the delivery of the following specific deliverables within the following time frame to IUCN’s Regional Office for West Asia.

Deliverable	Deliverable Description	Timeframe
D 1	Inception reports and updated work plans. It aims to illustrate and present clearly and timely all methodologies, and approaches that will be applied for the three abovementioned assessments (Ecosystem in the targeted areas at AlUla County, Vegetation survey, and Field pedological work, and soil survey). The work plan has a clear timeframe for the implementation of the assigned deliverable.	15th October 2023
D 2	First report: the first report must summarize and show the first findings on Field Pedological Work and Soil Survey, vegetation survey, and ecosystems (Maps with a resolution of 50 cm or less).	15th November 2023
D 3	Final Report: A comprehensive final report summarising all and showing the final findings on field pedological work and Soil Survey, soil analysis, Georeferenced soil database, and thematic Maps with a resolution of 50 cm or less).	31th November 2023

Payment Schedule

The consultant is expected to submit all deliverables by the end of September 2023 through office and fieldwork, and consultation with the IUCN ROWA, RCU's experts, and other key stakeholders. Both the Royal Commission for ALUla (RCU) and the IUCN-ROWA office must approve the planned deliverables before they can be accepted.

The consultant shall submit an invoice according to the schedule of payments described below:

- 30% upon signing the contract.
- 20% upon delivery and approval the inception report (Deliverable 1)
- 20% upon delivery and approval of the first report (Deliverable 2)
- 30% upon delivery and approval of the final report (D3).

Monitoring, control, and validation of the work

The consultant will work collaboratively with the IUCN ROWA-Drylands, livelihoods, and gender program for the successful delivery of the assignment deliverables. Provisional approval of submitted deliverables shall occur at each of the defined milestones in the deliverables section. The consultant shall account for a minimum period of two weeks when delivering the reports, for IUCN to review and accept the deliverables. The consultant is expected to hand in the final version of the deliverables no later than 15 days after IUCN and relevant stakeholders have made their observations and comments. The delivery schedule should be agreed upon with IUCN ROWA at the start of the project and confirmed before each milestone.

Compensation modality and indicative budget

1. The consultant will be paid through a lump sum amount which is all-costs inclusive. All costs (professional fees, travel costs, living allowances, communications, consumables, etc.) that could possibly be incurred by the consultant must be factored into the final amounts submitted in the financial proposal. Note that the contract price is fixed regardless of changes in the cost component.
2. If the consultant is subject to tax in the territory of Jordan in respect of the consideration received under this agreement, the consultant hereby acknowledges that IUCN is entitled to deduct 5% for residents of Jordan and 10% for residents outside Jordan, in addition to 1% as a national contribution for non-residents, as income tax arising or made in connection with this agreement. Also, IUCN will deduct a 5% amount as admin and review costs arising or made in connection with this agreement.
3. Financial offers shall be submitted in US dollars.

Qualifications of Successful Candidate

- Proposing firms are required to prepare a simplified technical proposal to apply for this consultancy. The proposal will include a section called "Approach and Methodology", in which firms should explain specifically how they will achieve the outputs and deliverables, the data sources and/or baseline assessments that will be used to inform their proposed approach,

the details of any joint ventures, and what staff will comprise the project team. Firms must also describe their relevant professional experience in ecosystem restoration, and relevant experience elsewhere.

- Proposing firms that suggest innovative and/or original approaches to achieve the project outputs and outcome, and additional opportunities for training and/or knowledge products, will be regarded favourably.
- The bidder's financial proposal shall include all costs to deliver the expected outputs. Bidders' financial proposals will be assumed to include: (i) all key and non-key experts, in accordance with the person-month allocation for each as defined by the proposing entity; (ii) mobilization and travel costs of all experts, including travel, accommodation, per diems, among others; (iii) all fieldwork, surveys, and workshops; and (iv) corporate overheads including insurances.
- The proposing firms must show a strong understanding of environmental science, conservation principles, sustainable land management practices, and ecosystem restoration. The proposing firms should be knowledgeable about the ecological dynamics of arid and semi-arid areas and have experience working on similar projects.
- Knowledge and familiarity with regional strategies, such as the Royal Commission for AlUla's (RCU) plans and the Saudi Green Initiative, as well as national environmental strategies, will be advantageous. Understanding the policy context and the ability to align the proposed strategy with broader objectives is important.
- The candidate should have experience working collaboratively with diverse stakeholders, including government agencies, local communities, and environmental organizations. Strong communication and interpersonal skills are crucial for successful engagement and building partnerships.
- Ability to succinctly compile large amounts of information into a coherent document for conservation practitioners and government officials.

Nature of penalty clause in the contract

If the requested deliverables are not submitted within the timeframe stated in this TOR, the payments will be withheld. International Union for Conservation of Nature – Regional Office for West Asia (IUCN-ROWA) reserves the right to:

- Withhold all or a portion of payment if performance is unsatisfactory, if work/outputs are 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.

Important notes:

- All the deliverables from the consultants whether reports, presentations, documents, etc. should include (IUCN, RCU) logos and it should be mentioned whenever this activity is mentioned.
- Any pictures, figures, charts, etc. used in this consultancy must include the copyrights.
- The final compiled reports for this assignment will need to follow IUCN's visual identity and publication guidelines, which will be provided by IUCN, if applicable.