

# **Terms Of Reference for**

## **Hydrogeological Study for catchment areas at Ain Zhalta and Falougha**

Al Shouf Cedar Society (ACS) is seeking a consortium of experts on forest and water management

To conduct a Hydrogeological Study for catchment areas at Ain Zhalta and Falougha

Location: Park house, Maaser El Shouf, Lebanon  
Announcement: 25 September 2024  
Deadline for Offers Submission: 9 October 2024  
Contract signature: 22 October 2024

**Location:**

Ain Zhalta village: lands surrounding Nestle factory, and the small-scale agricultural lands which are linked to the water springs and deep wells.

Jabal Kneisseh- Falougha where the main water sources are available.

**Duration:** 3 months after the contract signature

**Objective:** This Study is implemented by AL-Shouf Cedar Society in partnership with SEML, a company incorporated under the laws of Lebanon, registered with the Register of Companies in Baabda under number 2027944 with its registered office at Sin El Fil.

The proposed future action aims at achieving better management and conservation of the water resources and land use in the buffer and development zones of the SBR including the small-scale agriculture areas, and Jabal Kneisseh mountain.

**a. Background**

The Shouf Biosphere Reserve (SBR) has been regarded as a water tower. It constitutes a region-wide water capture and recharge zone which benefits at least 21 villages and towns, hundreds of commercial facilities including restaurants and cafés, and three commercial water bottling industries where SEML is one of them. The SBR also nourishes several perennial rivers (Litani, Damour and Awali) and about 231 springs including more than a dozen perennial springs. Some of those springs are either tapped by water utilities or by residents who traditionally fill water jugs from these springs because there is a general perception that spring water is better than grid water. Untapped surface water flows freely and supports downstream ecosystems (better known as “environmental water” or water which serves ecological purposes). In addition, The SBR has about 20 hill lakes and storage ponds that provide water to various ecological activities including: agriculture, reforestation, domestic and wild animals, etc.

ACS is focusing on advancing the water sector, aiming to expand its scope by executing water and wastewater projects. These initiatives are intended at improving water management in response to the effects of climate change and the economic crisis we are facing.

SEML is a renowned producer of bottled mineral water in Lebanon, a wholly owned subsidiary of Nestlé Waters, the number one bottled water company worldwide.

**b. The recruited expert is expected to:**

- Perform a Literature review for the water assessments previously conducted in the 2 regions.
- Update the water assessment done by Antea group for Ain Zhalta including an analysis of meteorological data, interventions needing rehabilitation, rainwater harvesting, use of treated water in irrigation).
- Consolidate the historical water resource data and interpretation for wells; F1, F3, S7 and RA2.
- Interpret pumping tests for Nestle- Sohat wells to define wells efficiency.
- Suggest a maximum sustainable pumping limit from RA2 well.
- Include the wells CCTV interpretation in the report and well maintenance (rehabilitation).
  
- Specify Important Water Related Areas (IWRA) in both regions; Quality and Quantity risks to be defined, Highlight and define the Historical importance for each one, define the local importance as WASH / irrigation for each one and provide an action plan to mitigate the Risks highlighted.
- Develop water stewardship plan for both sites as part of AWS recertification.
- Define the allocated catchment Geological structure and highlight the vulnerable areas in both regions.
- Study and update the aquifer balance.
- Suggest a monitoring plan to monitor water sources (flow, quality, etc.)
- Provide an overview of the water supply demand and infrastructure and wastewater network and situation in the catchment.
- Assess the selected sites for OECM recognition (potential OECMs) according to the criteria developed by IUCN.
- Develop a management plan one for Falougha site that includes the forest and water aspects. (forests, land ownerships, Agricultural activities, Grazing activities). Highlight the previously performed Projects by Nestle (Barouk area, Safa Area etc...).

**Table of deliverables:**

<b>Deliverable</b>	<b>Expected duration</b>
Literature review report	1 week after contract signature
Maps and data on Important Water related Areas	3 weeks after contract signature
Updated water assessment for AinZhalta including the results of the tests done on the wells	6 weeks after contract signature
Draft management plan for Falougha including a monitoring plan to monitor water sources	2 months after contract signature
Results of the OECM identification criteria done on the sites	2.5 months after contract signature
Final management plan for Falougha including data on water supply demand, aquifer balance and recommendations	3 months after contract signature

**Evaluation Criteria:**

The below selection grid will be used in the evaluation process:

Price or cost proposal	40%
Rational & strategy	40%
Experts	10%
Time Table	10%

**Language requirements:**

The offer should be submitted in English.

**References:**

Procurement Coordinator, Tarek Yazbek; [tarek@shoufcedar.org](mailto:tarek@shoufcedar.org)

Project Coordinator, Lara Kanso; [lara@shoufcedar.org](mailto:lara@shoufcedar.org)