

**TERMS OF REFERENCE FOR EXTERNAL CONSULTANT
on Industrial Wastewater Treatment**

Title: Industrial Wastewater Treatment Project (IWT)

TERMS OF REFERENCE FOR CONSULTANT

Industrial Wastewater Treatment Project – IWT

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1. BACKGROUND INFORMATION

1.1. Beneficiary Country

Republic of Lebanon.

1.2. Contracting Authority

Association of Lebanese Industrialists – ALI.
(See Website: www.ali.org.lb)

1.3. Responsible Body

Overall responsibility for this assignment is ALI, represented by its General Manager, Talal Hijazi.

2. CONTRACT OBJECTIVES & EXPECTED RESULTS

2.1. Background of Project

The IWT project is funded by USAID through the Lebanon Community Support Program (CSP). The main purpose of IWT is to develop the culture of industrial wastewater treatment ~~and promote both economically and environmentally responsible treatment of industrial wastewater while complying with the applicable environmental regulations. as a benefit and not a burden on the industrial sector.~~

Project Duration: 18 Months, from December 49, 2020 till June 309, 20224

ALI's goal is to work with the industrial sector that in turn can benefit from the adoption of best practices in Wastewater management. Equally, this sector in Lebanon can also lead by example on the economic benefits of improvements in industrial wastewater management.

ALI's objective is to foster priority actions to improve Wastewater treatment in industry by promoting improvements in wastewater treatment efficiency among industries and conducting outreach to improve efficiency in those industries.

ALI will ~~assist~~ encourage industries to undergo wastewater ~~assessments~~ audits to identify technologies and practices they can adopt to improve wastewater treatment efficiency and reduce wastewater generation.

ALI will establish a Project Technical Assistance Unit (PTAU) (Ali Majed & Talal Hijazi) to manage the Grant awarded by CSP. The PTAU will then manage the disbursement of incentive rebates to selected industries who have taken serious measures to improve wastewater treatment through capital investments made to integrate wastewater treatment technologies and practices into their processes. The PTAU will monitor and evaluate all submitted proposals. Jointly with CSP, ALI will closely monitor the operation of the PTAU.

This unit can also be used to implement recommendations and provide mediation efforts to link industries with investment facilities available in the country, organize awareness sessions on environmental protection and wastewater treatment.

The purpose of this action is to instill greater awareness and decisive actions and investments that conserve and protect Lebanon's precious water resources and lead industries to improve wastewater treatment.

Project Goals:

- Promote wastewater treatment at the industrial production chain level, by implementing wastewater treatment measures along with related capital investments in advanced wastewater treatment technologies
- Encourage small-scale innovative and low-cost infrastructure projects in industrial wastewater treatment and reuse
- Foster capacity building to further entice industries in wastewater treatment and integrate Corporate Social Responsibility actions towards cleaner production measures

Project Activities:

- 1) Design and launch the incentive rebate program
- 2) Conduct baseline wastewater assessments water audit for the committed Tahina, olive oil, and & pickles industries in Lebanon and propose related mitigation measures
- ~~3) Evaluation of submitted proposals by industries including required pre and post inspections~~ Conduct one technical workshop on wastewater treatment for selected industries
- ~~3) Verification of installed systems through necessary inspections at the level of the selected industries~~
- ~~4)~~
- ~~5) Conduct endline wastewater assessments for the selected Tahina, olive oil, and pickles industries in Lebanon~~
- ~~4)6)~~ Provide incentive rebates to industries that have adopted technologies and practices to improve wastewater treatment
- ~~5) Conduct awareness workshops on wastewater treatment for various industries~~
- ~~6)7)~~ Dissemination of project results

Expected Results:

- Establish pilot innovative and sustainable approaches to wastewater treatment in the Lebanese industrial sector
- Improve wastewater treatment by employing wastewater treatment measures and integration of advanced technology to improve wastewater treatment efficiency and reduce wastewater generation.
- Conversion of at least 7 industries to better wastewater treatment

Direct Beneficiaries:

Award at least 7 incentive rebates to Tahina, olive oil, and & pickles industries to after implementing the wastewater treatment initiatives defined through the baseline wastewater management improvement plan assessments.

2.2. Background of Contracting Authority & Funder

~~ALI~~ Established in 1942, ALI (The Association of Lebanese Industrialists) is the main national association of manufacturing companies operating in Lebanon. It deals with economic, social and environmental issues concerning the industrial sector and advocates a policy of balanced industrial development for all Lebanese regions. The Association seeks to create and maintain an environment which is favorable to industrial investment, job creation, growth and development.

ALI represents Lebanese Industry and interprets the needs and recommendations of the industrial community in dealing with public institutions and participates actively in policy-making consultations. ALI has been supporting the industries by providing services related to environment and energy including water management.

USAID's Community Support Program (CSP) is an \$80 million seven-year project (2018-2025) designed to improve the delivery of essential services and enhance the livelihoods of underserved and vulnerable communities located primarily in Lebanon's North, South, and Beqaa regions. Under the wastewater management component, CSP is partnering with the Ministry of Energy and Water (MoEW), water and wastewater utilities known as regional water establishments (RWEs), the Litani River Authority (LRA), municipalities, and local communities to implement sustainable improvements in wastewater management. The purpose of this component is to identify and implement interventions that mitigate the pollution resulting from the discharge of untreated domestic and industrial wastewater into the environment.

CSP background

2.3. Overall objectives

The Consultant shall be the technical expert of IWT. The Consultant shall conduct at least 7 baseline assessments and 7 endline assessments throughout the grant lifetime. The external consultant shall undertake a baseline wastewater management assessment for each selected industry and propose suitable measures, along with reliable technologies to mitigate pollution. After conducting the necessary field visits and measurements, the external consultant shall generate a baseline assessment report including mitigation measures for each enrolled industry. Furthermore, the external consultant will verify the performance of the installed systems and generate an endline wastewater management assessment report for each participating industry. This document will showcase the outputs of the implemented interventions and confirm that the industry is compliant with the pretreatment and discharge standards set by the Lebanese public authorities.

2.4. Specific activities and results to be achieved by the Consultant and assigned Level of Effort

- ~~• Development Conduct of~~ baseline wastewater assessment to committed Tahina, olive oil, and pickles industries in Lebanon ~~(LoE: 30 days)~~
- ~~Perform including~~ required field visits, and subsequent wastewater ~~measurements tests during and after the implementation phase to quantify of wastewater reduction (LoE: 30 days).~~ The cost of the wastewater quality tests will be covered by the Consultant.
- ~~• Actively participate and present any relevant findings during IWT launching/closing ceremonies and technical workshop on industrial wastewater treatment. Actively participate and present findings in 4 awareness workshops on wastewater treatment for various industries (LoE: 3 days)~~
- ~~Development of~~ Conduct endline wastewater assessment to selected Tahina, olive oil, and pickles industries in Lebanon including required field visits and subsequent wastewater tests to monitor the implementation of the proposed mitigation measures and quantify wastewater reduction. The cost of the wastewater quality tests will be covered by the Consultant. ~~(LoE: 17 days)~~

Table 1: Tasks and deliverables of assignment

<u>Task</u>	<u>Description</u>	<u>Deliverable</u>	<u>LoE (Days) Payment schedule</u>
<u>1</u>	Conduct Development of baseline wastewater assessment to <u>committed</u> Tahina, olive oil & pickles	Base-line report Wastewater testing results	30 50%

	industries in Lebanon including required field visits and subsequent wastewater tests		
2	Perform required field visits and subsequent wastewater measurements test during and after the implementation phase to quantify of wastewater reduction	Evaluation and proposal analysis report	30
23	Actively participate and present any relevant findings in during IWT launching/closing ceremonies and 4 awareness workshops on technical workshop on industrial wastewater treatment for various industries	Presentations mentioned events. in	10%
43	Development of Conduct end-line wastewater assessment to selected Tahina, olive oil & pickles industries in Lebanon including required field visits and subsequent wastewater tests to monitor the implementation of the proposed mitigation measures and quantify wastewater reduction	End-line report Wastewater testing results	1740%
<u>Total</u>			<u>80100%</u>

3. ASSUMPTIONS & RISKS

3.1. Assumptions underlying the project intervention

- Consultant will be provided necessary assistance and information needed by ALI along with ~~and~~ Tahina, olive oil, and pickles industries

3.2. Risks

- Insufficient assistance and information needed for the Consultant is provided
- Inability to conduct assessments on time due to COVID-19 lockdown measures that may cause delays in the implementation process

- Inability to conduct proper wastewater quality tests due to a potential lack of equipment at the level of laboratories due to the current economic crisis

4. EXPERTISE REQUIRED

4.1 Personnel

Key expert on wastewater treatment in industry

Qualifications and skills

- University degree in Environmental science, Environmental Engineering or other related fields

General professional experience

- At least 10 years professional experience in the area relevant to the assignment.

Specific professional experience

- At least 7 years experience in missions related to the assignment.

Language Skills

- Proficiency in reading, writing, speaking and understanding English and Arabic with French considered as an asset.

4.2 Facilities to be provided to the Consultant

None - The expert should be adequately equipped to fulfil the tasks (e.g. Office, Computer, etc.).

5. REPORTS

5.1 Reporting requirements

The Consultant will prepare a baseline wastewater assessment report, ~~evaluation~~ and an end-line assessment report as per the deliverables listed in table 1, and any other additional report arising from the activities.

5.2 Submission and approval

One hard copy and a soft copy of reports and other outputs will be submitted to ALI. The Reports will be commented on/approved within 10 working days. If commented on, the expert will have 3 working days to make modifications, giving again 5 days for ALI's comments/approval.

6. MONITORING AND EVALUATION

6.1 Definition of indicators

- Achievement of contract objectives (as specified in the Terms of Reference)
- Ability to meet deadlines
- Quality of service
- Client relations
- Written communication
- Drive and determination
- Job management
- Personal effectiveness
- Technical competence

7. SPECIAL REQUIREMENTS

The Consultant will be asked to sign the Confidentiality Agreement with ALI prior to provision of any further industry data. All material and communication that will be provided by ALI and the industries to the Consultant must remain confidential and no hard or soft copies of those will be kept by the expert.