

## Terms of Reference

### Water Engineering Firm – Irrigation Canal Nahr el Bared



#### Assignment description

<b>Function</b>	Water Engineering Firm: feasibility study, full project proposal and supervision of works
<b>Project logframe activity</b>	<p>MASAR Specific Objective 2 (SO2): To improve service delivery to generate greater social stability outcomes, based on the needs of host, refugee, and IDP populations.</p> <p>Pilot project: Improvement of irrigation canal infrastructure and management capacities for the Union of Oussat wa Sahil al Qaytaa</p> <p><u>This assignment contributes to the implementation of the following activities:</u></p> <ul style="list-style-type: none"> <li>2.1.4 Feasibility study on the capacities on the design and required human resources for management and operations and upgrade of the irrigation canal.</li> <li>2.4.1 Development of capacity building training program and requirements for improved operations.</li> <li>2.4.6 Draft technical documents with Union and municipalities and co-design internal process for the canal procurement of works</li> <li>2.6.1 Develop an overview of the needs of the irrigation canal. Selection and approval of plans for improvement work.</li> <li>2.6.5 Operationalization of the structure to manage the canal and ensure quality of service</li> </ul>
<b>Project background</b>	<p>MASAR for Local Governments is a programme funded by the <b>EU MADAD Trust Fund</b>. The overall aim of the programme is to strengthen the long-term resilience of targeted subnational governments and their host, refugee and IDP populations to deal with displacement.</p> <p>Sub-national governments in Iraq and Lebanon have been the first to be confronted by the repercussions of the Syrian refugee crisis: increased pressure on local services, competition for local employment opportunities, eroding social cohesion, faster urbanisation trends, rent-seeking behaviour and inflation due to externally injected funds in the local economy, and so forth.</p> <p>MASAR focuses on the urban setting, which is the background of processes of displacement, investment, employment and service delivery.</p> <p>In Lebanon, the programme aims to help governorates of Baalbek-Hermel, Akkar, <b>coastal plain north of Tripoli</b> and their unions of municipalities to deal with accelerated urbanisation caused by the crisis.</p> <p>This programme will mobilise municipal experts from Lebanon and Europe to contribute to building the capacity of subnational governments.</p> <p>This capacity development can include, among others:</p> <ul style="list-style-type: none"> <li>- provision of technical advice;</li> </ul>

	<ul style="list-style-type: none"> <li>- training;</li> <li>- coaching and mentoring addressed to municipal Planning Units or Service Departments.</li> </ul> <p><b>Capacity building activities</b> will be complemented by <b>pilot projects</b> aiming to, for instance, designing an urban layout to improve an existing network of streets and roads to better accommodate a higher influx of traffic, or to set up a municipal solid waste sorting plant to better cope with increasing volumes of litter.</p> <p>MASAR project is being implemented by a consortium of European entities: VNG International (the association of municipalities of the Netherlands), the Polish Center for International Aid (Polish acronym PCPM), the Catalan Agency for Development Cooperation (Catalan acronym ACCD), and Local Government Denmark (Danish acronym KL).</p> <p>The expert will work with <b>ACCD</b> under direct supervision by the Front Officer in the coastal plain north of Tripoli, including areas within the Governorates of North Lebanon and Akkar.</p>
<b>Geographical scope of the assignment</b>	Union of Municipalities (UoM) of Oussat wa Sahil al Qaytaa, Governorate of Akkar; Naher al Bared canal covering 5 municipalities: Bebnine, Mouhamara, WadiJamous, Burj al Arab and Qobet Chmera
<b>Specific background materials</b>	<ul style="list-style-type: none"> <li>• MASAR project reports including profiles of Unions of Municipalities</li> <li>• Technical Proposals facilitated by the MASAR experts.</li> <li>• Data facilitated by North Lebanon Water Establishment</li> <li>• Other open-access studies.</li> </ul>
<b>Aim and scope of this assignment</b>	<p>ACCD, with the technical support of experts from the Department of Agriculture of the Government of Catalonia, lead a preliminary assessment on the irrigation canal of Nahr el Bared crossing the UoM Oussat wa Sahel al Qyataa. The assessment identified <b>critical deficiencies</b> in the infrastructure preventing the governmental authorities and users from maximizing the use of the canal. These challenges include:</p> <ul style="list-style-type: none"> <li>- Absence of safety measures and proper road signs leading to recurrent road and safety incidents specifically involving children</li> <li>- Solid waste dumping and accumulation.</li> <li>- Uncontrolled wastewater discharges</li> <li>- Illegal housing construction, refugee informal settlement.</li> <li>- Decline in agriculture products in terms of quality and quantity due to the poor quality of water</li> </ul> <p>As a result, ACCD in partnership with the local governments of the UoM Oussat wa Sahel al Qyataa will implement a quick impact pilot project on the irrigation canal of Nahr al Bared that <b>focuses on the mandate of local governments as entry point</b>. As such, the proposed intervention will concentrate on both “<b>hard</b>” and</p>

**“soft” components** – that is on hardware and small infrastructure improvements as well as on optimising management, institutional collaboration and community awareness campaigns. According to the preliminary study, the proposed interventions would be:

- **Safety measures along the canal** for pedestrians and cars, affecting roads, traffic signs, etc. Focus on urban areas “black spots” where most of the car accidents or drownings occur. Fences, nets or other protection measures can be considered.
- **Prevention of Waste dumping** in the canal. The expert/firm will analyse and propose the installation of safety fences (eg. Tramex) also serving the purpose of protecting solid waste accumulation.
- Complementary to interventions undertaken by other international partners on the irrigation canal (for example FAO or IRC), ACCD can dedicate some project activities to **cleaning solid waste** in the urban areas including the secondary network of the canal. The firm will assess the needs in this regard and propose cleaning actions.
- Study local solutions for the prevention of **household wastewater** discharges on the canal that can improve water quality. Sceptic tanks and other solutions can be considered.
- Community **awareness and advocacy** programmes on protection, safety, waste prevention, wastewater discharge.
- Recommendations to local governments for the management of **urban planning and land use** around the canal to determine usage and permits.

In accordance with the scope of the interventions described above, ACCD will select a firm for a three phase assignment: 1) feasibility study and preliminary project proposal; 2) full project proposal with detailed BoQ; and 3) supervision of the execution of works.

Phase 1 study will propose options for infrastructure improvement with preliminary bill of quantities. It is important to note that the **maximum budget for the works to be implemented is 250.000 Euro**. The resulting **project document** will provide a quantitative and detailed proposal for the infrastructure component and the suggested improvement, together with supportive **capacity building programme** that includes awareness for both community and local governments.

The technical study will be shared for consultation with the Water Establishment, the Union and specifically the five member municipalities through which the canal flows. Based on the results of this study, a final decision on the scope of the project and its specific activities will be taken by ACCD in consultation with the local governments and community through the Union committee.

The principles of good governance, institutional and financial **sustainability** and **ownership** by the local governments beyond the lifespan of MASAR project will be critical in the definition of the work plan.

	<p>Considering that the <b>North Lebanon Water Establishment (NLWE)</b> is the mandated authority to manage irrigation infrastructure and water distribution, the study must take into account their role in approving and supervising works. Furthermore, it must analyse the relationship between NLWE and the local governments.</p>
<b>Key Responsibilities</b>	<p>The expert/firm is.</p> <ul style="list-style-type: none"> <li>• Feasibility study on infrastructure improvement for safety, solid waste and wastewater;</li> <li>• Develop a project proposal with quantitative proposal, BoQ</li> <li>• Conduct awareness and consultations to gather communities' views and support around the proposed solutions;</li> <li>• With the guidance of ACCD, mobilise support of local governments and other public authorities: NLWE and the Ministry of Energy and Water. Under the directives of ACCD, present to them the project proposal and other required public presentations of the project.</li> <li>• Provide ACCD with a legal analysis and obtain all the necessary permits, licenses and approvals required</li> <li>• Develop the technical specifications for the procurement of works, including safety and health provisions</li> <li>• Supervise the execution of works in all technical and administrative matters, including on-site management of the contracted construction company, approvals, verifications and final drawings.</li> <li>• Liaise with the key stakeholders (mayors, head of municipalities/ unions, municipal and Union staff, local community consultations) under the guidance of ACCD staff;</li> <li>• Draft the required reports with actionable, realistic recommendations.</li> </ul>
<b>Main activities</b>	<p>Based on the previous studies commissioned by ACCD, the expert/firm will undertake the following:</p> <p><b><u>PHASE 1: Feasibility Study and Preliminary Project Proposal</u></b></p> <p><b>Output 1: Safety assessment and proposal:</b></p> <ul style="list-style-type: none"> <li>• Identify the main issues regarding pedestrian and traffic safety on the designated area of the canal, identifying the "black spots" where most accidents and drownings occur. Focus on the high-density urban areas.</li> <li>• Identify and prioritise solutions (a, b, c, d...) in terms of infrastructure improvements for road crossings, bridges, road signs, fences, borders, and the like. Prioritisation criteria will take into account: potential impact, risk reduction, acceptance by the users and authorities, and finance.</li> </ul>

- Formulate technical quantitative proposals according to the identified alternatives (a, b, c, d...) including investments, works and budget.

**Output 2: Solid waste assessment of and proposal:**

- Identify and characterise the waste problems affecting the canal including mapping the “black spots” of the illegal dumping points, solid waste accumulation points, clogging, and most severe infrastructure affectations. Focus on the high-density urban areas
- Identify and prioritise solutions (a, b, c, d...) in terms of infrastructure improvement to prevent waste dumping and accumulation. Prioritisation criteria will take into account: potential impact, risk reduction, acceptance by the users and authorities, and finance.
- Formulate technical quantitative proposals according to the identified alternatives (a, b, c, d...) including investments, works and budget.

**Output 3: Wastewater assessment of and proposal:**

- Identify and characterise the wastewater discharges in urban areas. Map “black spots”. Focus on the high-density urban areas
- Identify and prioritise local solutions (a, b, c, d...) for the prevention of wastewater discharge. Prioritisation criteria will take into account: potential impact, risk reduction, acceptance by the users and authorities, and finance.
- Formulate technical quantitative proposals according to the identified alternatives (a, b, c, d...) including investments, works and budget.

**Conduct a workshop with UoM and municipal staff to present the findings and recommendations and validate the proposal for infrastructure improvements.**

**Output 4: Management and capacity building programme:**

- Describe the legal mandate of the public bodies involved in canal infrastructure and management (including but not limited to: municipalities, UoM, Water Establishment, Ministry of Energy) and assess the current state of collaboration between them in the Nahr al Bared canal.
- Assess the current technical, HR and management capacity of the five municipalities and the Union in relation to the irrigation canal, including institutional setup and coordination.
- Identify capacity-building needs for local governments that contributes to the sustainability and improved management of the public services related to the canal: road safety, solid waste prevention, infrastructure maintenance, environmental standards.

- Present and validate the findings with the municipalities

#### **Output 5: Community awareness programme:**

- Propose a community awareness programme tackling protection and safety, waste prevention, wastewater discharge, etc.
- Define target groups for awareness that considers host community, displaced and Syrian refugee as well as youth and gender inclusivity.

#### **Output 6: Preliminary project proposal with action plan**

- Prepare a preliminary project proposal (*avant-projet*) with different options on infrastructure improvement that include technical specifications for procurement and legal requirements (permits, licenses, approvals). The preliminary project proposal shall include an estimate of operational and maintenance costs (financial sustainability) from the side of municipalities.
- The proposal shall include Bill of Quantities for the infrastructure work in adaptation to the Lebanese market and context. Note that the maximum budget for works is 250.000 Euro.
- The project proposal document shall also include a plan of action with timeframe of both the soft and hard components.
- Executive summary with actionable recommendations.

### **PHASE 2: Detailed Project Proposal**

#### **Technical Scope**

- Evaluate ACCD (and stakeholder's) feedback on the Preliminary Project Proposal and express technical opinion on the selected interventions;
- Finalize the selection of the solutions in collaboration with ACCD, Water Establishment, Ministry of Energy UoM and the concerned municipalities;
- Develop the identified infrastructural solutions in the 3 main axis of interventions: Safety Improvement, Solid Waste Dumping and Accumulation, Wastewater Network and Discharge;
- Elaborate the Project Execution Drawings;
- Elaborate the Bills of Quantities of each intervention and the Specifications documents;
- Prepare the fair cost estimation for each intervention (note that maximum available budget of final works to be executed is 250.000 Euro);
- Preparation of the Request for Quotation (RFQ) including bidding conditions and evaluation criteria;

- Preparation of the Project Management Process for the execution of the works including the organizational chart and the different project checkpoints;
- Elaboration of the COVID-19 prevention measures at the construction site;
- Elaboration of the Construction Safety Plan to be adopted during execution;
- Propose a management plan for the UoM and municipalities to sustain the improved infrastructure in relation to safety, waste and wastewater. The management plan shall consider the creation of a Technical Committee with municipal personnel, its structure, tasks and responsibilities;
- Submit the Final Tender Documents and RFQ to ACCD for approval and launching;

#### **Legal Scope**

- In close collaboration with ACCD team, follow-up on administrative requests in order to secure approvals from the Water Establishment, Ministry of Energy and Water and the concerned Municipalities;
- Any structural intervention should acquire the typical construction permitting validations including the necessary certifications at the Order of Engineers and Architects, Ministry of Public Works, General Directorate of Urban Planning and related Municipalities;
- Validate the legality of the interventions by making sure no interference is happening between the project targeted location and private or public properties;
- Highlight all the legal issues to be sorted out before the execution of the project and efficiently follow-up their solution;
- Obtain, on behalf of ACCD, all necessary approvals, permits and licenses.

### **PHASE 3: Supervision of the Works**

#### **Procurement**

- Participate in the Pre-Bid Meetings and Site Visits with the bidders;
- Draft the technical specifications of the procurement of works
- Elaborate evaluation criteria for the procurement of works
- Participate in the Technical and Financial Evaluation of the bids;
- Consult on the selection of the contractor(s) and participate in the Contract Negotiations;

#### **Technical management**

- Verify and approve the planning of works (including the timing to complete different sections of the work) by the contractors;
- Verify compliance of contractor to expected standards established in the tender and to sound engineering practices;
- Supervise construction works on site;
- Propose, or validate and approve to contractor, if necessary, any change required to complete the works as expected;

	<ul style="list-style-type: none"> <li>• Support the procurement officer in performing estimations of completed works to validate contractors' bills;</li> <li>• Follow-up contractor to display minimum security, hygiene and protection standards on site;</li> <li>• Elaboration of as-built drawings for all interventions at the end of the execution;</li> </ul> <p><b>Administrative management</b></p> <p>Overall, the scope is to ensure communication between contractor and ACCD acting as the lead interlocutor between both.</p> <p>Some specific tasks are:</p> <ul style="list-style-type: none"> <li>• Prepare standard weekly and monthly reports with notes from works executed;</li> <li>• Supervise that the approved plan by the contractors is followed;</li> <li>• Propose technical and administrative solutions that can help speed administration to successfully complete the project;</li> <li>• Inform promptly of any problem, wrongdoings and negligence affecting execution;</li> <li>• Organize Partial Completion assessment and handover;</li> <li>• Elaboration of a Video Documentary and 6x A0 colour posters on the project execution;</li> </ul> <p><b>Financial management</b></p> <p>Support ACCD procurement team in:</p> <ul style="list-style-type: none"> <li>• Validating bills by contractors in order to process payments;</li> <li>• Reviewing financial attachments to bills and monitor tranches;</li> <li>• Establishing a financial tracking tool to control disbursements to contractors;</li> <li>• Internally reviewing costs to control expenses;</li> <li>• Preparing the financial clearance for the contractors in order to process final payments;</li> </ul>
<p><b>Outputs / Deliverables</b></p>	<p>The expert will prepare and submit the following outputs/deliverables:</p> <p><b>PHASE 1:</b></p> <ol style="list-style-type: none"> <li>0. Detailed work plan including assessment tools and strategy of work</li> <li>1. Topographical survey, produce topographical map and draw the existing irrigation and drainage network;</li> <li>2. Safety assessment and proposal</li> <li>3. Solid waste assessment and proposal</li> <li>4. Wastewater assessment and proposal</li> <li>5. Validation workshop report</li> <li>6. Management plan, capacity building and awareness programme</li> <li>7. Preliminary project proposal</li> </ol>



	<p>8. Executive summary in English and Arabic</p> <p><b>PHASE 2:</b></p> <p>9. Evaluation report on ACCD selections and decisions on Phase 1;</p> <p>10. Longitudinal profile and cross sections of the canal before and after the interventions;</p> <p>11. General Masterplan including all the interventions;</p> <p>12. Detailed Engineering Execution Drawings for each intervention including Landscaping, Architectural, Structural, Mechanical and Electrical Layout;</p> <p>13. Bill of Quantities &amp; Fair Cost Estimation;</p> <p>14. Specifications and Submittals;</p> <p>15. Request for Quotations (RFQ);</p> <p>16. Project Management Process;</p> <p>17. COVID-19 prevention measures in the construction site;</p> <p>18. Construction Safety Plan in the construction site;</p> <p>19. Written approvals on the detail project proposals from concerned municipalities, UoM, Water Establishment and Ministry of Energy and Water;</p> <p>20. Final Report on project legal issues demonstrating the way they have been solved;</p> <p><b>PHASE 3:</b></p> <p>21. Evaluation report of procurement of works</p> <p>22. Progress Reports on a Monthly Basis including both Technical and Financial updates;</p> <p>23. Minutes of Meetings (1 weekly meeting);</p> <p>24. Written requests for project amendments and variation orders;</p> <p>25. Final Report;</p> <p>26. Video Documentary + 6x A0 posters;</p> <p>27. Management plan for the Municipalities;</p> <p>28. Complete set of “as built” blueprints and drawing with all details of situation, real dimensions of all the elements and facilities built.</p> <p>29. Recommendations for future projects;</p>
<b>Reporting requirements</b>	The firm will work under the supervision of ACCD’s Front Officer and in close collaboration with the project team.
<b>Profile of bidder</b>	The consulting firm/organization shall offer a complete team of experts in order to carry out the required tasks in the most complete professional and competent

manner. The team shall comprise at a minimum the needed experts in the different fields of engineering/science involved in the performance of the tasks such as: irrigation, agriculture, hydraulics, civil, etc. The team composition and roles, with credentials and qualifications must be clearly presented in the proposal and an organizational chart showing the hierarchy in the management structure and flow of instructions/information must be inserted.

The consulting firm shall be a reputable institution, which have completed similar projects in Lebanon preferably in the North and Akkar region; shall have the relevant experience in each of the required fields of which a minimum of 6 years of experience in assessment and design of water management and irrigation systems;

The firm shall provide proof of sufficient capacity in the following fields:

- 1- Land/water (Irrigation)
- 2- Solid Waste Management
- 3- Waste Water Management
- 4- Agricultural Engineering
- 5- Administrative Law

The minimum qualifications and skills of the key experts shall be:

1. Education:
  - Higher education degree (Masters level) in the related discipline;
2. Professional Experience:
  - Minimum of 7 years of experience in the field of expertise.
  - Extensive knowledge with Lebanese municipal context and development processes and institutions.
  - Proficiency in report writing, case studies and other related documentation.
  - Conducted at least two similar consultancies preferably in Lebanon,
  - Experience teaching, training for local governments will be valued;
  - Cultural sensitivity and cross-cultural skills (religion, ethnicity, gender);
  - Experience in conducting training and preparation of training materials/ curriculum;
  - Proficiency in English and Arabic
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## Terms and Conditions

### Estimated period of the assignment

The duration of the assignment will be subject to the approval of project proposal, obtaining necessary permits and licenses by relevant public authorities - North Lebanon Water Establishment and Ministry of Energy and Water most notably.

	<p>As an estimation, the different phases can be divided as follows:</p> <ul style="list-style-type: none"> <li>- Phase 1 (feasibility study and preliminary proposal): start date end of November 2020: 25 days approximately</li> <li>- Phase 2 (full project proposal): subject to satisfactory completion of phase 1 and approval by NLWE: 30 days approximately</li> <li>- Phase 3 (supervision of works): subject to approval of project proposal and conclusion of the procurement of works: 45 days approximately</li> </ul>
<b>Required Documents</b>	<p>Qualified firms/organizations are requested to submit the following required documentation:</p> <ul style="list-style-type: none"> <li>• An inception report (Two pages maximum) narrating the Consultant's understanding of the assignment.</li> <li>• Company Portfolio and Sample report of similar consultancies and client contact details</li> <li>• Curriculum Vitae (CV) of key proposed staff for this assignment. The CVs should outline relevant knowledge and work experience on projects of similar nature. For each relevant work experience cited, outline the precise role of the Consultant and duration of the contract/assignment. Shortlisted candidates will be required to provide reference and contacts for their previous work experience cited.</li> <li>• Technical proposal and work plan providing an estimation of days for each outcome</li> <li>• Financial proposal comprising a breakdown of numbers of days and rate per day</li> </ul> <p>ACCD will evaluate the proposal and select the firm/organization accordingly.</p>
<b>Selection Process</b>	<p><b>Technical Evaluation Stage:</b></p> <p>The technical offer will be evaluated using the following criteria and percentage distribution.</p> <p>Total percentage of the technical offer is 80% and distributed as follows:</p> <ol style="list-style-type: none"> <li>1- Company Profile (Portfolio + Sample of Previous Assessment): 20 points</li> <li>2- Technical Proposal: 40 points</li> <li>3- CVs of Key Experts: 20 points</li> </ol> <p>NOTE: The passing score for the technical evaluation is 60/80. Bidders who do not pass the technical evaluation will be disqualified.</p> <p><b>Financial Evaluation Stage:</b></p> <p>The total percentage of the financial offer is 20% of the total Score.</p> <p>The maximum number of points (20 points) will be allotted to the lowest price offer.</p> <p>All other price offers will receive points in inverse proportion to the lowest price.</p>
<b>Location of the Assignment</b>	<p>Akkar: Oussat wa Sahel al Qaytaa Union; 5 municipalities: Bebnine, Mouhamara, Wadi al Jamous, Burj al Arab and Qobet Chamra.</p>

<b>Relevant contact details</b>	<p>Enric Ibarz (ACCD Area Manager, Tripoli): <a href="mailto:enric.ibarz@gencat.cat">enric.ibarz@gencat.cat</a></p> <p>Corinne Sakr (Coordinator on Municipal Strategic Planning, Tripoli): <a href="mailto:corinne.sakr_ext@gencat.cat">corinne.sakr_ext@gencat.cat</a></p> <p>Nicole Ochando (Project manager, Barcelona) : <a href="mailto:nicole.ochando@gencat.cat">nicole.ochando@gencat.cat</a></p>
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Government of Catalonia