

# Terms of References for Irrigation Engineer

## Background

Sustainable Development Account Moldova (SDA Moldova) (*hereinafter – the institution*) is a public entity established by the Government of the Republic of Moldova as a successor of Millennium Challenge Account Moldova (MCA Moldova), entity which implemented the Compact Program in Moldova financed by Millennium Challenge Corporation, a US Government funded agency. Currently, after the finalization of the Compact Program implementation period, the goals of SDA Moldova will represent, among others, the promotion of public implementation capacity, expansion of irrigation infrastructure, ensuring the sustainability, and facilitation of access to finance for agricultural businesses.

In addition to this, the team will provide: (1) capacity development support to Apele Moldovei Agency and other Ministry of Environment subordinated institutions to best service the needs of Water User Associations and river basin water resources; (2) define and deliver immediate and short-term legal and technical assistance to Compact CIS Water Users Associations to advance their capacities to manage new irrigation assets and support other WUAs interested in asset management transfer of irrigation infrastructure following the developed under the Compact Program WUA Law; (3) improve water resource management by using the E-Gov water management systems; (4) facilitate refinement and implementation of the Nistru River Basin Management Plan developed during the Compact implementation period; and (5) promote parallel or co-investment in sustainability of water resources activities among Government institutions, donor community, private sector and other stakeholders.

## 1.OBJECTIVES OF THE ASSIGNMENT

The overall objective of this assignment is to provide technical and support services for SDA Moldova (*hereinafter – the Client*) management in managing all technical and engineering aspects of the infrastructure activities that are in the process under the infrastructure investment activity. The current SDA Moldova activity agenda includes construction of two additional irrigation modules on the centralized irrigation system (CIS) Chircani Zarnesti and drainage system rehabilitation of CIS Cahul. The institution will also continue to pursue and follow up with all activities typical for the defect notification period on all 10 CISs rehabilitated during the Compact program implementation. The Consultant shall provide all such services and engineering guidance to the Client, which will be required at all stages of the planned activities in order to ensure quality of the design and works, timely execution, respecting the budget and institution objectives. This would include but not necessarily be limited to:

(i) **Design:** design management including, but not limited to, review of the design documentation and cost estimates, identify errors and possibilities for value-engineering, in coordination with

Water Users Associations and state agency Apele Moldovei, as needed recommend design modifications;

**(ii) Procurement:** provide technical quality assurance for tender documents including Invitation for Bids (IFBs) for works and Request for Proposal (RPFs) for consultants to be procured pertaining the infrastructure investment activities performed by the institution. Under management request, participate in evaluation panels to review the works bids, consultants proposals in accordance with the qualification, evaluation and award criteria set out in the bidding documents;

**(iii) Construction:** perform, if requested by SDA management, contract management and administration including both construction supervision and works contracts on both the technical and administrative aspects;

**(iv) Post-Construction Operations:** Follow-up on: activities typical for defect notification period; close-out of the works contracts; supervision engineer services during the DNP, implementation of the operation and maintenance (O&M) plan.

## 2. SCOPE OF SERVICES

The overall scope of assignment is to duly execute the tasks of SDA Moldova's agenda connected with infrastructure investment activity according to the arrangements, objectives and approved by the institution working plans..

As Consultant, the incumbent will be responsible for attaining the objectives listed in Section 4 below. He/she will work closely with contracted consulting firms, individual consultants and works contractors, and under the overall management of the Infrastructure Activity Team Lead of SDA Moldova and in cooperation with the Supervision Engineer, Infrastructure Expert and Cross Cutting specialists. In particular, the Consultant shall manage all technical and engineering aspect liked to institution infrastructure activity and if requested support the Team Lead and Infrastructure Expert in contracts management and administration aspects..

The consultant will use the institution resources effectively in order to accomplish the objectives previously listed in performing the following tasks:

1. **1. Supervise the initiated design processes** – the incumbent shall be the contract manager handling relations between the Client and Contractors or consultants teams including any design sub-contractors that are involved in the development of design packages or technical documentation for the investments project to be financed by the institution;
1. **2. Design verifying and expertise** - the Services will be performed at the end of design stage, but before starting the construction stage. At this stage the Consultant will perform all the necessary activities to control the correctness of the design documentation and cost estimates, in order to correspond to the essential requirements of the Expertise to assure its approval, including: (i) structural design norms; (ii) safety in utilization; (iii) fire safety; (iv) hygiene, health, environment regeneration and protection; (v) thermal isolation, waterproof and energy saving; (vi) noise regulations; (vii) other specific requirements;

1. **3. Participation in the IFBs and RFPs evaluation process** and selection of the construction works, consulting companies and individual consultants - in order to select and contract the best qualified companies with the most advantageous conditions for the Client in accordance with the tender documents and institution procurement guidelines. The Consultant will take part in preparing the evaluation reports with the respective evaluation panels;
1. **4. Contract Management and Administration** - During construction the consultant may be asked to support the Infrastructure Team Lead and Infrastructure Expert in their efforts to manage and administer the Infrastructure Consultants and Contractors contracts. Therefore the incumbent may execute typical activities for a contract manager and administrator and may be in charge to manage the technical and administrative aspects of the works including finance and management relevant documentation. This will also entail management of change order process and claims, etc.;
1. **5. Post-construction Operations** - The Consultant shall assure proper implementation of the O&M manuals and coordinate adequate technical assistance to the Water User Associations (WUAs) for CIS operations.
1. **6. Other related tasks** – The Consultant may be requested by the management of the institution to perform other tasks directly related to the above listed tasks, but not explicitly listed.

### **3. RESPONSIBILITIES OF THE CONSULTANT**

Using available resources and construction supervision consultant, as appropriate, the incumbent is expected to provide relevant consultancy to the Client in the following areas:

1. **1.** Review, comment and contribute with proposal for improvement for design concepts, detailed designs, technical documentation and any design item related to water sources, pumping stations, transmission mains, reservoirs, distribution networks, etc;
1. **2.** Provide specific technical direction to the supervision engineer/or supervision consultants and contractors on implemented infrastructure investment activity and ensure for timely delivery, incorporation of appropriated value-engineering where applicable, and adequate materials and quality for works executed;
1. **3.** Manage design changes during construction with the Engineer to assure that revised drawings and specifications are handed over to the contractor(s) on time, and manage any related change orders where applicable;
1. **4.** Conduct frequent, effective field trips to project sites, including overnight stays when needed, both during design and construction, assuring that contractors, consultants and stakeholders follow the agreed plans;
1. **5.** Ensure that all works and infrastructure activities are implemented according to the existing norms and standards and in line with environmental and social policies enforced by

the government and those adopted by the institution. On any environmental and social matter, keep in permanent contact with cross cutting specialists of the institution and key stakeholders, the WUAs, Apele Moldovei and local public authorities;

1. **6.** Support the Team Lead and Infrastructure Expert in review, comment and pre-clear the infrastructure activity consultants and contractors deliverables and reports;
  1. **7.** Prepare concise monthly progress reports related to infrastructure activities pertaining to design consultants, construction supervision consultants, works contractors, and others as the case will be. The reports shall also identify existing and new risks and in coordination with the infrastructure investment activity team lead and infrastructure expert develop and offer detailed action plan to mitigate any such risk. The format of these reports will be agreed by the Client and the Consultant after entering into a contract agreement;
  1. **8.** Provide needed technical support to the Client for preparations of the works IFBs and infrastructure consultants RFPs, and perform quality assurance (QA) review of the bidding documents. Participate in the evaluation panels if requested;
  1. **9.** Participate in the works commissioning and works acceptance committees and support the contractors and Engineers to get all approvals from authorities. Organize and lead the commissions if there will be the case;
- 10.** If the case will be, act as a point of contact or as contract manager&administrator for the Consultants and Contractors as requested or appointed by SDA Moldova Management ( *see the chapter 2, item 4 above*);
- 11.** As may be requested by the Executive Director or Infrastructure Investment Activity Team Lead execute and any other specific assignment connected to infrastructure projects.

#### **4. REPORTING REQUIREMENTS**

The Consultant shall report and coordinate on technical and project management matters with the infrastructure investment activity team lead. During the entire assignment period, the Consultant and the Client will hold weekly meetings to coordinate all technical and other matters arising. The Consultant is also expected to pro-actively report and/or meet with the client in a timely fashion on ad hoc basis where urgent risks emerge. The Consultant shall submit the monthly progress reports during the first week of each month.

#### **5. DURATION OF THE ASSIGNMENT**

It is planned that the base contract will be for one year starting on or about February 1, 2016, with annual renewal option thereafter. Client will negotiate a final time schedule with the successful Consultant as part of the contract negotiations. The agreed time schedule will include milestones and specify deliverables, and their contents and timing. The renewal options shall be at the sole discretion of the Client. The client shall inform the Consultant about annual renewal options no less

than 30 days prior to the completion of the 12 month period of the Base Contract and each annual contract option thereof. In total this contract could be extended up to 12 months, as follows:

Base Contract - 12 months

Option Year 1 - 11 months

## **6. INSTITUTIONAL ARRANGEMENTS**

The Consultant shall be under the supervision of the infrastructure investment activity team lead who shall make the final decision on major technical and management issues related to the activities as required.

The Consultant will sign lump-sum contract. The participation in this assignment shall require full time presence in Chisinau, Moldova.

## **7. FACILITIES AND INFORMATION TO BE PROVIDED BY MCA-MOLDOVA**

In order to fulfill its obligation the Client shall provide the Consultant with:

- 1) Office space with furniture, fixe telephone line, computer and necessary office supply;
- 2) All existing set of documents, survey, technical documentation, design packages and Concept papers and any other necessary information connected with the present assignment;
- 3) Contracts and Agreements that have direct link with the Consultant assignments and responsibilities;
- 4) Transportation means for business trips to fulfill his contractual obligations when there is a need to move on sites.

## **8. CONSULTANT'S QUALIFICATIONS**

The Consultant shall have the following minimum qualifications and skills:

- (i) At a minimum the applicant shall have a university degree in irrigation engineering, or water engineering, civil engineering or other related fields;
- (ii) a post graduate degree, or training, in a related field such as management of irrigation and/or water supply projects will be an advantage;

- (iii) At a minimum, the applicant shall have four (4) years of progressive relevant professional experience, which may include detailed design of irrigation/water systems, management of such detailed design, construction management and/or construction supervision of irrigation/water systems, or similar related experience. It is preferred that the applicant have direct management experience of irrigation/water supply rehabilitation projects including management of several simultaneous works contracts;
- (iv) Preferred relevant experience should include related detailed design for tender documents, construction supervision and/or construction management, cost estimating, procurement, etc.;
- (v) Strong people and interpersonal skills;
- (vi) Strong analytical and report writing skills;
- (vii) Demonstrated excellent oral and written communications skills;
- (viii) Demonstrated ability to work effectively with multidisciplinary, socially and ethnically diverse teams and stakeholders;
- (ix) Demonstrated professionalism, good judgment, and flexibility to work as necessary outside normal work hours to meet deadlines and needs of the position;
- (x) Responsible and flexible attitude and capacity to manage multiple tasks in different areas without supervision;
- (xi) Strong computer skills with MS Office (2007 or newer) and MS Project (2007 or newer) are required. AUTOCAD and EPANET (or equivalent hydraulic modeling software) familiarity are a plus;
- (xii) Experience in working with international financial institutions (IFIs) and/or other donor organizations in the irrigation or water supply sector will be an advantage.

Persons interested in participation in the selection should submit their CV via e-mail to:

Millennium Challenge Account – Moldova

[office@mca.gov.md](mailto:office@mca.gov.md)

The applications must be submitted not later than **17:00 on January 12, 2016**.