

Terms of Reference

Materials Engineering Expert – MoTRD Laboratory Staff Training

Ministry of Transport and Roads Development – P101-081

1. Background to SDF

The Somaliland Development Fund (SDF) was established in 2012 to provide a single vehicle through which development partners could support Somaliland's development goals. The first phase of the SDF was implemented in 2013-2017 and supported the Government of Somaliland (GoSL) filling a critical gap through funding projects that are fully aligned to the National Development Plan (NDP) while at the same time recognizing the role of GoSL in the delivery of basic services.

The Somaliland Development Fund – Phase 2 (SDF2) covers the period 2018-2024. SDF2 is conceived as an inclusive economic development programme. It supports the GoSL in delivering infrastructure that is relevant for inclusive economic development. It focuses on sustainable investments that spur job creation and fast growth, while at the same time laying the foundation for long-term resilience and development, leading to a more stable and peaceful Somaliland. SDF2's ambitions are fully aligned with the NDP2 and reflect the priorities set out in Somaliland Vision 2030. Like in SDF1, all support will be aligned with government priorities as defined in Somaliland's second National Development Plan (NDP2) 2017-2021. The Fund Manager is responsible for the day-to-day management and administration of the Fund.

The objectives of the SDF2 are threefold:

1. Support increased inclusive economic growth through investment in productive, strategic infrastructure to enhance economic growth and revenue generation.
2. Strengthen and maintain the capabilities of the Government of Somaliland to prioritize and manage the sustainable and equitable development of Somaliland's infrastructure.
3. Support strong government ownership of development priorities aligned with the National Development Plan.

2. Ministry of Transport and Roads Development Project

The SDF has allocated funds to the Ministry of Transport and Roads Development to implement the Burao-Berbera Road Rehabilitation Project. The project contains four outputs, namely:

Output 1:

The first output contains a capacity development for MoTRD staff to carry out road maintenance activities and quality assurance of road constructions works. Proposed capacity enhancement are staff trainings, procurement of maintenance equipment and enhancement of maintenance unit for MoTRD, traffic safety policy and introducing Highway development and maintenance management program HDM4 to utilize road cost economy, best practice design and maintenance.

Output 2:

The second output involves community engagement through creation/enhancing or formation of Roads community committees along with the project areas and another stakeholder (consumers) in Sahil and Togdheer regions. The purpose of these committee is to communicate project information and dialogue on project issues, community project participation, inclusion, transparency and accountability. The expectation of project impact are the economic development

and livelihood contribution of the rehabilitated road to the community along the project area, production industry and land transport sector.

Output 3:

The third output involves full rehabilitation of 82km of Burao-Berbera road which transcends between Sahil and Togdheer regions in Eastern Somaliland. The project also will involve replacement of reinforced concrete bridge decks for bridges, namely Dubur, Lalays, Kalajab and Galekor, installation of new culvert pipes, reinstating of road furniture as well as road marking.

Output 4:

The fourth output involves conducting a feasibility and design scope of the road section between Erigavo city and Maydh town which is 78.7km. The accessibility of current gravel road is very rough and tough with mountainous terrain features. The economic contribution of road if developed at a later stage will play a vital role in enhancing the Somaliland fisheries economy. It will specifically unlock the untapped blue economy in the Sanaag region and support economic growth. SDF1 invested considerable amount of funds to the fisheries sector in Sanaag region (Maydh, Xiis, and Lasuurweyn) towns to increase the fishing activities of the eastern coastal regions.

3. Scope of work

The MoTRD/RDA laboratory unit is charged with responsibility for ensuring that the materials used in construction or rehabilitation of Somaliland roads meet national and international standards, and are suitable for the type of climate and condition of Somaliland. As part of the technical capacity building, the MoTRD project will spend a part of the funding in training the laboratory staff in conducting road construction material tests. Under SDF1, the RDA materials laboratory was provided with material testing equipment as well training of staff, giving the laboratory capacity for material testing that it never had.

The proposed training will build on gains made under SDF1 to further enhance the capacity of the laboratory staff to be able conduct more advanced testing to ensure Somaliland roads quality is maintained. The MoTRD SDF2 funded project is seeking the services of a short-term Materials Engineering Expert (MEE) to conduct technical training needs assessment as well as deliver actual training of MoTRD/RDA laboratory unit staff. The MEE will be expected to:

- Carry out a capacity assessment of laboratory personnel to identify gaps and opportunities to deliver the mission of the department.
- Propose training (intervention) based on the identified gaps and opportunities.
- Deliver laboratory training programme aimed at addressing the identified skills gaps.

4. Key Tasks

The MEE is expected to conduct the following tasks:

4.1 Staff skills need assessment

- Conduct a desk review on institutional key documents, including Laboratory and Quality Assurance documents, mandates, plans, and aspirations.
- Consult with other training needs assessment reports, particularly the SDF1 need assessment and training programmes to understand the skill gap level.
- Identify the on-going and planned capacity development initiatives of this agency to improve service delivery or/and enhanced project management.
- Identify key skills and competencies gaps in among the laboratory staff that requires to be addressed to enable the staff to manage and deliver the department's mission or mandate.
- Produce a summary of findings.

- Produce comprehensive training needs assessment report for approval.

4.2 Laboratory Equipment Assessment

- Verify the condition of all equipment, level of accuracy of test results, and calibration status.
- Conduct verification to ensure operability and equipment calibrated where necessary to ensure standardization of generated reports.
- Produce a summary of findings.
- Recommend an operation and maintenance (servicing, repairs, maintenance) protocol for the existing laboratory equipment.

4.3 Develop Training Programme

- Develop and implement a training program to enhance the technical knowledge and skills of the laboratory team based on the needs assessment.

NB. Expert will provide six (6) weeks break once above three tasks are completed and report is delivered for review and approval.

4.4 Deliver Training Programme

4.4.1 Preparation of the course content and materials and ensuring relevance to the MoTRD laboratory staff. This includes the development of:

- A detailed course programme, outlining per training session *what* content will be covered and *how* (i.e. presentation by the trainer, sub-group work, individual exercise etc.). The programme needs to take into account breaks for prayer and refreshments/lunch. The programme should also indicate any homework to be assigned. Homework assignments can take a maximum of 0.3 day per week to complete. They should be very practical in nature (e.g. assignments for which the trainee can draw on experience from his/her work) and avoid massive reading.
- The course content may include but not limited to:
 - Quality assurance procedures and the materials inspection and testing procedures.
 - Professional use of laboratory with a practical aspect of material tests and reporting of laboratory results.
 - Investigation for sources of construction materials for embankment, concrete, and pavement structures.
 - Ensure familiarity with the laboratory equipment and its application.
 - Sampling, testing and interpretations on the required investigation on alignment soil, Concrete structures and Pavement structure including mix design.
 - Equipment used for assessing structural integrity of the existing bridges.
 - Conducting evaluation/assessment on existing pavement condition and the Equipment used to carry out the condition survey.
- The materials to be used during the course, including PowerPoint presentations, practical assignments, hand-outs and any homework assignments.

4.4.2 Preparation and conducting of pre- and post-training assessment. This includes:

- Preparing tailor-made test questions for a pre- and post-training assessment questionnaire.
- Ensuring that the questionnaires are filled in by the trainees, before and after the course.
- Testing the participants, which should be based on both theoretical and practical criteria to ensure all aspects are covered within the training.

4.4.3 Deliver the training in an interactive, practical, participatory and lively manner. This includes:

- Covering the subject matter theory (through lectures, hand-outs etc.) as well as the practice (through assignments, role-plays, work in smaller groups etc.);

- Any homework to be assigned in between classes, explaining it in one session and discussing it in the next one.

4.4.4 Consolidate materials and contributions which includes course materials and handover both electronic and hard copies to the MoTRD Project Manager and SDF Secretariat DTL – Projects.

4.4.5 Prepare and submit a Training Report, in line with the format provided, formally completing the assignment. The report should include:

- Introduction.
- Course objectives, programme and methodology (incl. material provided).
- Pre- and post-course assessment.
- General observations, lessons learnt and recommendations for follow-up.
- Successful candidates will be provided with a certificate of attendance by the Instructor.

4.5 Quality control for on-going rehabilitation works

- Develop(material) quality assurance plan for major construction/rehabilitation projects including site procedures on quality control in accordance with the specifications, norms, and practices.
- Plan parameters will be discussed and agreed with the Project Manager, Technical Advisor, SDF Secretariat.

5. Duration and Locations

The assignment will primarily be performed in Hargeisa with field mission to the project sites as required. The assignment is expected to be conducted over a period of 45 days.

6. Reporting Arrangements

The Expert will work under the overall supervision of the SDF Deputy Team Leader – Projects or designate and, on a day-to-day basis, will work with the PMTs, especially with the Project Manager and Technical Advisor of MoTRD.

7. Expected deliverables.

The Expert will prepare and submit to the client the following reports, including soft copies in editable formats (in Word, Excel, etc.). Submission shall be in draft form and final copy upon approval of the draft reports.

Activity	Deliverable	Working day
Inception report and presentation	Inception Report (maximum 10 pages including Annexes)	4 th day
Skills assessment	TNA report	10 th day
Laboratory equipment status assessment	Laboratory equipment report	14 th day
Develop training programme/materials based on the training need assessment	Draft training programme/materials	24 th day
Expert will go for six (6) weeks break to allow the client to review TNA report and training programme/materials		
Delivery of Training (2 weeks) including field work	Training report	38 th day
Draft training report and quality control assurance plan/Procedures include training	Quality control procedures	43 rd day

outcome and all relevant references documents as annex		
Final Report	Approved version	45 th day

8. Required Qualifications/Skills

The assignment will be delivered by a Materials Engineering Expert supported by a national counterpart seconded by the MoTRD. The MEE is expected to have the following skills, experience and qualifications:

Qualifications and skills

- At least a Bachelor's degree in either Civil Engineering, Material or Geotechnical engineering.
- Registration with relevant recognised professional body is a must.
- Proven facilitation, analytical and report writing skills (must submit at least three (3) website links for proof and/or report/publications list in CV for assessment as the main author).
- Demonstrated excellent command of spoken and written English.

General professional experience

- Minimum of 10 years' experience working as in road construction materials, existing pavement evaluation, geotechnical investigation, testing and pavement design highway construction, particularly in tropical countries.
- Work experience in East and Horn of Africa context is required.
- Demonstrated experience in capacity building (training, coaching) of teams.
- Proven experience of using modern road laboratory equipment.

Specific professional experience

- He/she should have at least six (6) years' experience as in-charge of road quality laboratory, quality control tests in projects like the one being implemented by MoTRD/RDA.
- Have conducted at least 2 similar training for laboratory staff on road construction materials, quality, and performance tests in the last 5 years.
- Materials Engineering Expert on at least one asphalt road rehabilitation/construction projects in the last 5 years.

9. Equipment

No equipment is to be purchased on behalf of the Client/Contracting Authority as part of this service contract or transferred to the Contracting Authority or local counterparts at the end of this contract. The Expert is expected to either rent or bring his/her equipment to complete the consultancy assignment with all the necessary software installed.

10. Fees and Allowances

- The successful candidate will be offered competitive daily fees.
- Fees will be paid on monthly basis based on agreed milestones and submission & approval of milestone report, timesheet and an invoice.
- Final payment will be made after the completion and approval of the final report.
- The SDF Secretariat shall organise and pay for the Expert's accommodation, travel within Somaliland, and DSA as per SDF guidelines.

11. Duty of care

- The Expert will work under the overall SDF Secretariat Health, Safety and Security protocols.
- The Expert will be expected to provide own insurance for health care (which must include Medevac provision which caters for Covid -19 related evacuation), accidents, and other

risks associated to the assignment. The SDF Secretariat shall be free from any liabilities arising from the same.

12. Other provisions

- **Accountability:** The SDF Deputy Team Leader (Projects) maintains the overall supervision of this assignment. However, the Expert will technically report to the Civil Engineer/Construction Specialist at the SDF Secretariat and will work on day-to-day basis with the Project Management Team at MoTRD, specifically the Project Manager and Technical Advisor.
- **Duty post:** The work is to be performed in Hargeisa. Travel to the field if required will be arranged by the SDF/MoTRD.
- **Personal computers:** The Expert will be responsible for provision of his/her own computer.
- **Possession of sites:** SDF Secretariat/MoTRD project team may accompany the Expert to field missions and within Hargeisa or outside for the purpose of possession of sites/familiarization. In this case, the Project Management Team staff and other relevant technical staff will be available to work closely with the Expert.
- **Relevant documents:** The SDF Secretariat/MoTRD shall furnish all pertinent available data and information and give such assistance as shall be reasonably required by the Expert in carrying out provision of this Agreement.
- **Office Space:** MoTRD will provide office space for the Expert's team during their stay in Hargeisa.
- The SDF Secretariat will arrange all transport by road or air as needed.
- The SDF Secretariat will arrange accommodation.