1. Title of Consultancy	**Terms of Reference for Consultancy Services for Conducting Feasibility Study and Design of Hafir Dam in Feer Feer Village, Hiran Region**
2. SCI Contracting Office	Save the Children (SC), Somalia Country Office
3. Consultant Type Required	Individual Consultancy/Firm
4. Responsibility for Logistics arrangements and Costs	Save the children will pay the consultant fee in installments and the consultant will cover their own logistical arrangements and costs; including food, accommodation and local transport and all cost associated with data collection work and other activities.
5. Taxation Provisions	Consultant shall be responsible for all Taxes arising from the consultancy in line with the local Tax regulations applicable at the SCI contracting office named above.
6. Travel Requirements	The consultant will cover his travel costs (tickets) and arrange local travel to field sites.
7. Security Requirements	Consultant will comply with standard of Save the Children Security procedures, including the completion of SCI online security training, adhering to the terms of access negotiation and maintaining low profile while in Somalia
8. Evaluation Criteria	**Essential Criteria:** • Valid Registration certificate from the ministry of commerce and industry of Federal government of Somalia • Valid Tax registration number & certificate from the Ministry of Finance of Federal Government of Somalia with good standing of Q2 2025 **Capability/Technical Criteria:** A) Firm's Experience – 30%: • The firm must demonstrate at least 10 years of experience in water resource infrastructure, including hydrological, geotechnical, or civil engineering projects. It should also show successful completion of at least three similar Hafir dam feasibility studies. Experience will be assessed based on relevance, complexity, and context. Supporting documents (e.g., contracts, reference letters) are required. B) Technical Proposal – 40% This criterion assesses the overall quality, feasibility, and technical soundness of the consultant's approach, including the methodology, work plan, and resource allocation. Evaluation will be based on the following components: • **Work Plan and Expert Alignment (15%)** Assesses the clarity and realism of the proposed work plan, including the logical sequencing of tasks, time allocation, and how well expert involvement aligns with each activity.

- **Methodological Approach (25%)**
  Evaluates the consultant's understanding of the assignment, proposed execution strategy, and management approach. This includes assessment of the organizational structure, staffing plan, and suitability of technical tools and equipment proposed for surveys and data analysis.

- **Sustainability Policy: 10%** Bidder submits comprehensive sustainability policy throughout of this consultancy assignment.
- **Detailed financial proposal with budget breakdown. (20%).**

Note: **The consultant should score 70% to be shortlisted for an interview.**

Terms of Reference

Consultancy Services for Conducting Feasibility Study and Design of Hafir Dam in Feer Feer Village, Hiran Region

A. Introduction

Somalia is yet to recover from the impact of the 2020 to 2023 historic drought and flooding in late 2023 and mid-2024, yet the country may be again moving towards another multi-season drought period. The increased frequency of cyclical droughts and floods has strained the coping capacities and resilience of millions of Somalis, leading to persistently high levels of vulnerability. Whereas current projections for drought-related displacement constitute about 38 percent (84,388) of the 222,074 overall displacements in the current Gu season, according to the DTM report in early June, this number is likely to increase in the second quarter of the year if dry conditions persist. The WASH situation in Somalia remains dire due to prolonged drought and weak infrastructure, with an estimated 5.24 million people projected to need humanitarian WASH assistance in 2025, a slight decrease from the previous year. The poor performance of the October to December 2024 rains has exacerbated the already dire conditions, leading to water scarcity and deteriorating sanitation facilities in drought affected regions, including Hiran. According to the Hirshabelle WASH Cluster Rapid Needs Assessment conducted in February 2025, in Hiran, households primarily rely on unprotected water sources, which are not available year-round. The distance to water sources and the cost of water have increased due to drought, exacerbating water-related illnesses among household members and significantly increasing their risk of sexual violence, harassment, or exploitation. These combined factors underscore the urgent need for improved access to safe water across affected areas to mitigate the impacts of dry conditions and reduce displacement.

To address the critical water shortage and strengthen the resilience of the community, Save the Children (SCI) is committed to improving water access in Feer Feer village, Hiran region, by constructing a Hafir dam as part of the Building Resilient Communities in Somalia (BRCIS III) Project. Recognizing the complexity of the water system and the potential environmental and social impacts, SCI will undertake a comprehensive preparatory phase before commencing any construction activities. A detailed feasibility study is a key component of this phase, designed to thoroughly evaluate the technical, environmental, and social viability of the proposed Hafirdam. This study will encompass geotechnical investigations to assess soil stability and foundation suitability, hydrological assessments to analyze water availability and catchment potential, and topographic surveys to understand the terrain and optimize the design and placement of the infrastructure. Additionally, environmental and social impact assessments will be carried out to identify potential risks, mitigate adverse effects, and ensure that the project supports sustainable development and community well-being. The outcome

of this feasibility study will be a comprehensive and accurate report that provides clear guidance on the selection of the most suitable site(s) for the Hafirdam, as well as recommendations for design and construction approaches that align with both technical requirements and community needs. To carry out this critical work, SCI is seeking a qualified and experienced consultant to lead the technical assessments, engage with local stakeholders, and produce a comprehensive report with evidence-based on the findings from the following technical surveys.

B. Objective(s) of the Assignment

The main objectives of this assignment are to:

- Preparation of a Detailed Feasibility Study Report:
- Conduct geotechnical, topographic, and hydrological surveys of the proposed site to identify the most suitable location for the new Hafir dam.
- Develop both preliminary and detailed designs for the proposed infrastructure.
- Assess the potential positive and negative impacts of the proposed Hafir dam and recommend appropriate mitigation measures

C. Scope of Services

The consultant is expected to utilize both secondary and primary data sources throughout the assignment to effectively carry out the consultancy services for the Hafir dam. This includes collecting and analyzing relevant existing data, as well as conducting field investigations and surveys. Additionally, the consultant is expected to conduct socio-economic and environmental impact assessments to identify the positive and negative impacts of the proposed interventions and recommend appropriate mitigation measures, considering potential impacts on natural and secondary environments and assessing potential short- and long-term impacts. The detailed scope of work for this consultancy is outlined below.

I. **Desk review of other existing relevant studies:** In this initial phase, the consultant will conduct a thorough review of all relevant existing studies, research, and documentation related to water infrastructure projects in the area. This includes gathering and analyzing available data on existing Hafirdams, previous reports, maps, hydrological records, and any other relevant information that can inform the feasibility and design of the proposed Hafir dam in Feer Feer village

II. **Field Investigations and Topographic Surveys**: The consultant will carry out comprehensive field investigations at the proposed site of the Feer Feer Hafir dam, including:

Topographic survey: Conduct a detailed topographic survey of the proposed dam site to accurately map the catchment area, runoff patterns, and elevation differences that contribute water to the Hafir dam. This survey will provide critical data for determining the optimal placement and design parameters of the dam.

Geometric, Geological, and Hydrological Surveys: Collect essential data on the physical and environmental characteristics of the site. This includes assessing soil composition and stability, identifying geological features and potential hazards, and analyzing water availability and flow

within the catchment. These surveys will support the technical design and ensure the structural integrity and sustainability of the dam.

Site-Specific Catchment Studies for Hafirdam: Focus investigations on the catchment area feeding the Hafir dam, including drainage patterns, runoff generation, and seasonal water availability. This will involve evaluating the quantity and quality of water inflows to optimize the dam's capacity and efficiency.

D. Preliminary and Detailed Design:

The consultant should prepare both preliminary and detailed designs for the proposed water infrastructure activities. This involves translating the findings from the desk review and field investigations into viable infrastructure designs. Preliminary designs will provide an initial concept and scope, while detailed designs will specify the technical specifications, materials, structures, systems, and components needed for construction.

- Prepare preliminary and detailed designs for Hafirdam infrastructure activities.

E. Detailed tasks and Expected Deliverables

For the Proposed one Hafirdam in Feer Feer village, the consultant will perform the following tasks:

a) **Soil Investigation for Dam Site Selection:** The consultant is responsible for conducting thorough soil investigations at the identified suitable dam site to determine the viability and sustainability of the proposed dam construction. The key components of this task include:
   i. The primary objective of hiring the consultant is to evaluate the soil characteristics within the vicinity of proposed dam site. This involves collecting soil samples and analysing them for properties such as porosity, permeability, and water content.
   ii. Special attention should be given to identifying any layers of soil or substrata that could affect the stability and integrity of the dam, such as expansive clays, sand layers prone to liquefaction, or rocky substrates.

b) **Geotechnical Survey:** the Consultant is required to conduct soil investigation with a comprehensive geotechnical survey. This geotechnical survey should include analysis of soil bearing capacity, slope stability and erosion potential.

c) **Topographic survey:** the topographic survey shall be carried out in the location site selected for the Dam in Feer Feer, by utilizing RTK or precision GPS. A precision up to 10 cm is required. The Topographic survey shall include:
   I. Transversal Profile should be carried out across the hafir dam's axis.
   II. Benchmarks (permanent reference points) should be marked for future surveys which helps understand the cross-sectional shape of the dam site during the construction.
   III. A longitudinal profile of the catchment around the Dam site should be carried out by the Consultant that extends from 500 m each direction particularly focusing on the upstream drainage to assess the water flow, potential flood risks, and sediment transport.
   IV. Contour of Dam Upstream Zone of Influence should be performed by Mapping points every 10 m along catchment area to specific distances (500m around the dam site) for evaluating the potential impact of the dam on nearby land and for planning construction.
   V. The consultant should produce, an AutoCAD format map with location, elevations, outcrops, and elevation contour lines (spaced at 0.5 m) which provides a detailed and accessible visual representation of the area.

VI. Excel Worksheet: the Consultant should prepare worksheet with all points' coordinates and elevations aids in data analysis and record-keeping for easy access and manipulation of data for various calculations and simulations.

F. Test Pits:

A minimum of five test pits should be strategically placed along the dam layout. The first pit at the center of the dam site and the remaining four at each corner of the proposed dam area. This distribution helps in getting a comprehensive understanding of the subsurface conditions across the entire site.

i. Each pit should be excavated to the depth of the proposed dam, either 3 or 4 meters deep. The depth ensures that the pits reach the layers of soil that will be affected by or will support the dam structure.
ii. In each pit, a lithological cross-section should be documented.
iii. During the excavation of test pits, samples of the alluvial sediments should be collected systematically. These samples should be performed for further laboratory soil analysis, which will provide detailed information about the soil properties, such as grain size distribution, mineral composition, and compaction.
iv. Samples for porosity and Permeability tests should be taken from the same locations as the test pits. These tests aim to evaluate the effective porosity of the sediments.

G. Detailed Hafirdam, and infrastructure designs:

Upon completion of all feasibility studies for Hafirdam, including hydrological analysis and geotechnical investigations, the consultant shall prepare the necessary detailed designs and BOQ, as part of the final project completion report. The main Engineering designs should be included as follows:

I. **Detailed Drawings, specifications, and BoQs of the Hafir dam in Feer Feer:** The consultant shall develop accurate and comprehensive detailed drawings that clearly specify all critical dimensions and features of the proposed Hafir dam. These designs should provide a complete technical foundation for construction and include the following elements.

- Dam Dimensions, precise measurement of dam depth, length, and width.
- Detailed cross-sections showing embankment slopes and layers.
- Spillway height, width and dimension of other features

The detailed design should include all necessary civil, structural, architectural, geotechnical, and foundation designs. In addition, the design package should incorporate the following critical component

- Engineering Specifications: Detailed technical specifications covering all aspects of the Hafir dam's construction shall be part of the design.

- Bill of Quantities: A detailed list of all materials, labor, and other resources required, along with estimated quantities and costs.

H. EQUIPMENT REQUIREMENT

The Consultant shall have and make available the following equipment and other relevant kits for the Survey:

EQUIPMENT REQUIRED FOR THE CONSULTANT	
1. Field Equipment for the Hafir dam survey:	
o	Global Positioning System (GPS) devises,
o	Surveying equipment (RTK,)
o	Laboratory and excavation machine for testing the soil.
o	Measuring tape,
o	Drawing and tracing equipment/hydrological modeling software/Computer with CAD can be used

I. Key Experts and Qualification Requirements

The following outlines the minimum qualifications and experience requirements for the key experts who are expected to be mobilized for the feasibility study and detailed design of the Hafirdam in Feer Feer village, Hiran region. The success and technical quality of this assignment depend significantly on the direct involvement of these professionals throughout the study and design phases.

- **Team Leader- Hydrologist/water resource engineer:** He/she shall have at least a master's degree (MSc) in hydrology or water resources engineering with 8 years of general experience and at least 3 years of experience as a team leader in the related field of expertise, and he/she must have proven work experience in similar assignments of conducting feasibility studies. Having a specific experience in similar works for at least 3 projects. The Hydrologist/water resource engineer will lead the overall feasibility study.
- **Water resource Engineer/ Civil Engineer:** He/she shall have at least a bachelor's degree in civil engineering or water engineering with 6 years of general experience and 3 years of related experience in the field of expertise, and he/she must have proven work experience in similar assignments. Having a specific experience in similar works for at least 3 projects. The engineer will mostly lead the Hafir Dam feasibility study, particularly the hydrology, geotechnical and engineering parts of the study.

- **Topographic Surveyor or Survey Engineer:** He/she shall have at least a bachelor's degree in surveying with general experience of 6 years and 3 years of related experience in the field of expertise, and he/she must have proven work experience in similar assignments. Having a specific experience in similar works for at least 2 projects. The surveyor will conduct the topographic survey.

- **Environmental Expert:** He or she must have at least a master's degree in environmental engineering or science, with general experience of 6 years, and 3 years of related experience in the field of expertise, and he/she must have proven work experience in similar assignments. Having a specific experience in similar works for at least 3 projects. The environmentalist will assess the environmental impact of the Hafir.

- **Socio-Economist**: He/she shall have at least a bachelor's degree in sociology or economics with general experience of 6 years and 3 years of related experience in the field of expertise, he/she must

have proven work experience in similar assignments. Having a specific experience in similar works for at least 3 projects. The socio-economist will assess the social and economic impact of the Hafir dam.

J. KEY DELIVERABLES

- The key deliverables of this assignment will include a comprehensive hydrological, geophysical and topographic survey, a social and environmental impact assessment report, and a detailed feasibility study report, including BOQ and engineering design drawings for the proposed Hafirdam.
- The consultant is expected to submit a soft copy of all finalized documents via email, along with two external hard drives containing the complete final report and all supporting materials.
- The consultant shall provide SCI with all relevant study materials, including soft copies of all quantitative and qualitative data sets generated during the consultancy.
- Any non-consumable items or documents used or produced throughout the course of the assignment must also be handed over to SCI upon completion of the consultancy

K. Proposed Criteria and Sub-Criteria for the Evaluation of Full Technical Proposals for the Feasibility Study

The evaluation of the technical proposals submitted for the Hafirdam feasibility study in Feer Feer village will be based on the following weighted criteria:

1. **General Experience of the Firm in the Field**

   The consulting firm must demonstrate a minimum of **10 years of general experience** in water resource infrastructure study and design and implementation. This includes evidence of past engagements in hydrological, geotechnical, or civil engineering assignments related to water systems development.

2. **Relevant Experience in Similar Assignments**

   The firm must have successfully completed **at least three feasibility studies and detailed designs for Hafir dams.** Experience must be evidenced by reference letters, contracts, or completion certificates. The relevance will be evaluated based on the scale, complexity, and geographic or environmental similarities to the current assignment.

3. **Quality of the Methodology and Work Plan Proposed**

This criterion assesses the technical soundness, clarity, and feasibility of the methodology and work plan submitted by the consultant. It includes the following sub-criteria:

a) Work Plan and Coherence between the Chronogram of Activities and Key Experts

This sub-criterion evaluates the feasibility, clarity, and alignment of the proposed schedule with the deployment of key personnel.

- **Detailed Work Plan.**

Assesses the logical sequencing of activities, adequacy of time allocated for each task, and realism of the timeline to complete the study within the contract period.

- **Coherence Between Activity Schedule and Expert Involvement.**

Evaluates how well the proposed work plan aligns with the presence and engagement of key experts at each stage of the assignment, ensuring expert input is appropriately matched with technical tasks.

b) Methodology.

This sub-criterion assesses the technical approach and execution strategy proposed for delivering the services as per the Terms of Reference.

Understanding of the Assignment.

Evaluates the consultant's comprehension of the assignment objectives, context, and expected outcomes, particularly in relation to Hafirdam feasibility and design in semi-arid rural settings.

Organization, Staffing, and Activity Management.

Reviews the proposed organizational structure, clarity in task distribution, expert roles, coordination mechanism.

Proposed Equipment and Tools.

Assesses the adequacy and appropriateness of the technical equipment and tools proposed for surveys, investigations, data collection, and analysis (e.g., RTK GPS, soil testing kits, hydrological modeling software, etc.).

Application Procedure and Requirement	HOW TO APPLY: Applications can be submitted by either: **Electronic Submission via ProSave (Recommended)** ➢ Submit your response in accordance with the guidance provided in the below document: Bidding on a Sourcing Event.pptx • Bidders are encouraged to apply via Ariba system. Please request the Ariba link via email sending your company profile and Business registration certificate/CV. Please address your request to apply via ProSave to css.logistics@savethechildren.org, **Electronic Submission via Protected Email box (Optional).** • Email should be addressed to southcentral.supplychain@savethechildren.org • Note – this is a sealed tender box which will not be opened until the tender has closed. Therefore, do not send tender related questions to this email address as they will not be answered. • The subject of the email should be **Feasibility Study and Design of Hafir Dam in Feer Feer Village, Hiran Region** as the subject" • All attached documents should be clearly labelled so it is clear to understand what each file relates to. • Emails should not exceed 15mb – if the file sizes are large, please split the submission into two emails.

	Do not copy other SCI email addresses into the email when you submit it as this will invalidate your bid. ➢ Your bid must be received, no later than 5th July ,2025. Bids must remain valid and open for consideration for a period of no less than 60 days. All proposals should be submitted as per the above procedure **The deadline is 15th July 2025**