

**TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS AND CONTRACTORS**

<p><b>Title:</b> Consultancy services to develop a Sustainability strategy on water treatment capacity (chemical planning and procurement, and stores management) for Commercial Utilities in Zambia (Cluster 3)</p>	<p><b>Type of engagement</b></p> <p><input checked="" type="checkbox"/> Consultant</p> <p><input type="checkbox"/> Individual Contractor Part-Time</p> <p><input type="checkbox"/> Individual Contractor Full-Time</p>	<p><b>Duty Station:</b></p> <p>Zambia (Home based)</p>
<p><b>Background:</b></p> <p>In response to outbreak of COVID-19, UNICEF, under the leadership of the Ministry of Water Development and Sanitation (MWDS) and in collaboration with Provincial and District Authorities is supporting improvement of WASH services in Zambia, in line with the Government of Republic of Zambia (GRZ)'s WASH Sector Contingency and Response Plan-2020, updated in 2021.</p> <p>The COVID-19 pandemic severely impacted the Commercial Utilities (CUs) in terms of revenue collection to finance operational costs. During the first wave, the government issued a moratorium for non-disconnection of water supply, resulting in adverse economic impact on the CU. Subsequent waves of the COVID pandemic, coupled with water tariffs (established in 2019) that do not reflect current realities, among other challenges have further exacerbated the challenging financial situation of the CUs.</p> <p>In response to a request from MWDS, UNICEF with funding from the KfW German Development Bank has been providing support to 11 CUs (see Annex 1) to ensure continuity of safe water supply, through the provision of water treatment chemicals (chlorine gas, alum, HTH etc) since 2020. This support was accompanied by monitoring of the management of supplies and recommendations for improving supply management. Monitoring reports will be availed to the successful bidder.</p> <p>In 2022, UNICEF received additional funding from KfW to further support provision of water treatment chemicals. The provision of water treatment chemicals under the new funding will be under an overarching strategy and framework intended to counteract a possible dependency of Zambian CUs on the time-limited Covid-19 commitment of cooperating partners in the area of financing operating materials and consumables. This funding will be depleted shortly.</p> <p><b>Purpose of the Assignment:</b></p> <p>To develop a sustainability strategy for water treatment capacity, procurement of chemicals and storage management for Commercial Utilities (CUs) in Zambia.</p>		

**Scope of Work:**

The main objective of the consultancy is to develop a MWDS sustainable water treatment chemical supply strategy for cluster 3<sup>1</sup> commercial utilities, provide TA support for implementing components of the strategy, and ensure effective monitoring of the use of water treatment chemicals and other critical supplies provided by UNICEF to cluster 3 commercial utilities and local authorities in response to COVID-19.

In order to meet the objectives listed in Section 2 the following specific tasks will be undertaken by the consultant:

- (i) Carry out stakeholder consultations<sup>2</sup> and investigation to inform the development of a MWDS sustainable water treatment chemical supply strategy for cluster 3 CUs and ensure all stakeholders (mainly commercial utilities) understand UNICEF will eventually no longer be supplying water treatment chemicals.
- (ii) Advocate for continued water treatment to be provided by the CU, and develop a sustainable water treatment chemical supply strategy to ensure sustainable financing, procurement, delivery, storage, distribution and usage of operating and consumable materials by the CU without support from cooperating partners (including procurement plan review, exploration of other sources of financing like private sector, supplier engagement) based on inputs at various stages received as state in point 1 above. Consideration should be made of the ongoing private sector situation analysis of the WASH sector in Zambia being undertaken by UNICEF, with an anticipated end date of December 2023.
- (iii) Provide estimates for procurement of test and laboratory material as well as only initial supply of laboratory reagents
- (iv) Carry out practical, accompanying training and support in the field and laboratory quality control (including raw water tests) as well as the efficient dosage of chemicals including occupational / health / environmental protection (for environmental protection also close interlinking with possible GIZ and other partner activities in the same CUs).
- (v) Review the revised GRZ's WASH response plan to COVID-19, requests for provision of chemicals and other critical supplies from commercial utilities and local authorities and other relevant reports/records;
- (vi) Undertake site visits to commercial water utilities and local authorities (including water treatment plants, warehouses etc), hold meetings with key staff and review relevant water production, chemicals consumption records, store records and other related data;
- (vii) Review critically the estimates/quantities for water treatment chemicals and other supplies provided by the commercial utilities and local authorities to UNICEF, based on water production/usage trends/seasonal variations/other available records;
- (viii) Provide revised/final estimates and technical specifications of water treatment chemicals and other supplies (such as dosers) needed by CUs on monthly basis, to UNICEF for use in one final procurement (date tba);
- (ix) Provide advice on specifications of the chemicals/ supplies and quality assurance/ testing requirements for future CU procurement; Consultant to suggest cheaper and alternative chemicals/ supplies/equipment where possible (quantities, specification, and possible vendors for CUs based on requirements at specific water treatment plants and distribution centres) to establish treatment efficiencies and cost effectiveness;
- (x) Support pre-delivery inspections to check the quality/ conformity to the agreed specifications;
- (xi) Undertake monthly site visits to commercial utilities to monitor the usage of chemicals and other supplies, check warehousing conditions (to ensure safety of the stored chemicals and staff), identify related challenges, get feedback on the usage from beneficiaries, gather data on number of beneficiaries. Cross-check the usage against review of the water quality monitoring data;
- (xii) Provide advice to UNICEF on exit plan for KfW support to water treatment chemicals (on a degressive basis), based on review of water production/usage records, revenue data and financial statements etc;
- (xiii) Provide advice to commercial utilities and local authorities on improving inventory management including record keeping (on receipts and distribution) warehousing and operational efficiencies regarding usage of chemicals and other supplies;
- (xiv) Provide on-site advice on recognizing and avoiding environmental hazards (considering planned GIZ activities); and
- (xv) Undertake other related tasks to ensure that the objectives of this assignment are fully met.
- (xvi) Where applicable, the CU-Platform is to be considered for implementing relevant tasks.

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<sup>1</sup> NWASCO 2022 Sector Report: CUs with more than 50,000 connections and water production above 50million m<sup>3</sup> per year are placed in Cluster 1. CUs with connections between 20,000 and 50,000 and water production between 10million and 50million m<sup>3</sup> per year are in Cluster 2. CUs with connections less than 20,000 and production less than 10million m<sup>3</sup> per year are in Cluster 3.

<sup>2</sup>As part of consultation, consultant to review NWASCO Water Supply and Sanitation guidelines relevant to water treatment and monitoring

The consultant will carry out the works based on consultations and meetings with MWDS, UNICEF, commercial utilities/ local authorities, sector cooperating partners, line government agencies at the provincial and district level, and other key partners/stakeholders; review of relevant documents and reports; field visits, site assessments, and regular monitoring. Following the development of the sustainable chemical supply strategy, the consultant will provide TA support directly into targeted CUs, prioritized, in consultation with MWDS and based on the recommendations in the strategy.

The focus of this work will be on cluster 3 CUs: North-Western, Eastern, Western and Luapula Water Supply and Sanitation Companies (<https://www.nwasco.org.zm/index.php/media-center/publications/water-supply-and-sanitation-sector-reports?task=download.send&id=94&catid=12&m=0>).

Note: The cluster 3 consultant is expected to liaise and exchange with the individual consultants that will be responsible for cluster 1 and 2 work. The cluster 1 and 2 work is in essence similar so strategy format to be standardised by UNICEF.

### Child Safeguarding

Is this project/assignment considered as “[Elevated Risk Role](#)” from a child safeguarding perspective?

YES  NO If YES, check all that apply:

**Direct contact role**  YES  NO

If yes, please indicate the number of hours/months of direct interpersonal contact with children, or work in their immediately physical proximity, with limited supervision by a more senior member of personnel:

n/a

**Child data role**  YES  NO

If yes, please indicate the number of hours/months of manipulating or transmitting personal-identifiable information of children (name, national ID, location data, photos):

n/a

More information is available in the [Child Safeguarding SharePoint](#) and [Child Safeguarding FAQs and Updates](#)

<b>Budget Year:</b> 2023	<b>Requesting Section / Issuing office:</b> WASH
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**Included in Annual/Rolling Workplan:**  Yes  No. If No, please justify: It's part of WASH 2023 AWP.

<b>Consultant sourcing:</b> <input type="checkbox"/> National <input type="checkbox"/> International <input checked="" type="checkbox"/> Both <b>Consultant selection method:</b> <input type="checkbox"/> Competitive Selection (Roster) <input checked="" type="checkbox"/> Competitive Selection (Advertisement/Desk Review/Interview)	<b>Request for:</b> <input checked="" type="checkbox"/> New SSA – Individual Contract <input type="checkbox"/> Extension/ Amendment
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**If Extension, Justification for extension:**

<b>Supervisor:</b> Charity Tuseko Sindano – WASH Specialist	<b>Start Date:</b> 1 October 2023	<b>End Date:</b> 31 July 2024	<b>Number of Days (working)</b> 66 days in a 10-month period
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**Work Assignment Overview:** The consultant will report to the Chief of WASH (supported by WASH Specialist for Enabling Environment), or their designate who will monitor and issue instructions on the expected deliverables and timelines. The consultant will prepare a work plan covering the duration of the assignment and subsequently submit deliverables against the approved work plan. The Consultant will be contracted by, and report to UNICEF Zambia. Other partners, like Ministry of Water Development and Sanitation, and Ministry of Green Economy and Environment will also quality assure the expected deliverables

The key deliverables under this assignment are shown below. Please note, the number of days of work is indicative. The duration of the project is longer than the days required for work to allow time for feedback from UNICEF and government, and emergencies.

<b>Tasks/Milestone:</b>	<b>Deliverables/Outputs:</b>	<b>Timeline (days)</b>	<b>Payment</b>
<p>Introductory work: meetings, compilation and desk review of literature etc. Prepare an inception report defining background review, methodology and detailed work plan (activities and timelines). The inception report will include a draft table of contents for sustainable chemical strategy which will cover the CUs in cluster 3 (Zambia) and implementation plan. The inception report will be presented and finalized with input from MWDS and other stakeholders.</p>	Inception report	5 days	5% of the contract sum
<p>Undertake round one of site visits to cluster 3 commercial water utilities and local authorities (including water treatment plants, warehouses and so on), hold meetings with key staff and review relevant water production and chemicals consumption records (including CU pre-delivery inspection records of chemicals) and other related data like stock records (for chemicals procured in July 2021); and develop estimates of water treatment chemicals and other supplies needed by the commercial utilities for next procurement (covering 3 months per procurement batch) along</p>	<p>Travel plan (ahead of site visit travel); and Report covering findings of site visit travel (including relevant water production and chemicals consumption records, pre-delivery inspection data, other related data like stock records, and estimates for 3-month procurement of chemicals for the commercial utilities</p>	<p>Site visit following procurement of water treatment chemicals, subject to confirmation that there will be another round of procurement of chemicals (including travel, and writing/reporting days) (Total_8_days)</p>	<p>15% of contract sum (following procurement of water treatment chemicals)</p>

<p>with specifications and note on quality assurance process.</p>			
<p>Undertake round two of site visits to cluster 3 commercial water utilities and local authorities (including water treatment plants, warehouses and so on), hold meetings with key staff and review relevant water production and chemicals consumption records (including CU pre-delivery inspection records of chemicals) and other related data like stock records (for chemicals procured by KfW-UNICEF after July 2021 and those procured using CUs' own resources); and develop estimates of water treatment chemicals and other supplies needed by the commercial utilities for next procurement (covering 3 months per procurement batch) along with specifications and note on quality assurance process. (<i>Deliverable 2</i>).</p>	<p>Travel plan (ahead of site visit travel); and Report covering findings of site visit travel (including relevant water production and chemicals consumption records, pre-delivery inspection data, other related data like stock records, and estimates for 3-month procurement of chemicals for the commercial utilities</p>	<p>Site visit at least 3 months after previous site visit, following procurement of water treatment chemicals, subject to confirmation that there will be another round of procurement of chemicals (including travel, and writing/reporting days)</p> <p>( Total 8_days)</p>	<p>15% of contract sum (at least 3 months after previous site visit, following procurement of water treatment chemicals)</p>
<p>Undertake field consultations and assessment, interviews, and development of draft sustainable chemical strategy.</p>	<p>Draft sustainable chemical strategy for cluster 3 CUs The strategy will include recommendations for:</p> <ul style="list-style-type: none"> <li>- Financing of operating / consumables (chemicals, alternative cost-effective chemicals and so on) with declining support of cooperating partners</li> <li>- Procurement of test and laboratory material, as well as only initial supply of laboratory reagents (as part of strategy implementation)</li> <li>- Support towards improving operational efficiencies i.e., minor rehabilitation and repairs, such as repairs of dosing equipment and installation of (automated) dosing equipment e.g., online chlorinators, that are practical, easy to be operated and maintained by the Cus</li> <li>- Capacity building interventions and required trainings and support in the field and laboratory quality control (including</li> </ul>	<p>15 days</p>	<p>20% of the contract sum</p>

	<p>raw water tests) as well as the efficient dosage of chemicals, occupational / health, etc.</p> <p>- Tracking implementation of the strategy (including treatment efficiencies of alternative chemicals, among other actions)</p>		
Facilitate national stakeholder workshop to get inputs into the draft sustainable chemical strategy and draft implementation plan; Prepare stakeholder workshop report	Workshop Agenda; Presentation on draft sustainable chemical strategy; and Consultation workshop report	1 day	To be combined with deliverable 6
Finalise sustainable chemical strategy and implementation plan	Final sustainable chemical strategy and implementation plan	5 days	10% of the contract sum
Provide Technical Assistance (TA) support, accompanying training and support in the field and laboratory quality control (including raw water tests and developing Standard Operating Procedures, SOPs) as well as the efficient dosage of chemicals including occupational / health / environmental protection (for environmental protection also close interlinking with possible GIZ activities). This will include: <ul style="list-style-type: none"> <li>- advice to commercial utilities and local authorities on improving inventory management including record keeping, warehousing and operational efficiencies with regard to usage of chemicals and other supplies</li> <li>-on-site advice on recognizing and avoiding environmental hazards (considering planned GIZ activities)</li> </ul>	<p>3 Monthly plans and reports (on TA support expect to provide (including travel);</p> <p>3 Monthly Reports on TA support and capacity building provided, based on the recommendations in the sustainable chemical strategy and on prior submitted monthly plan; and</p> <p>3 Monthly Recommendations reports to each CU</p>	Ongoing for up to 7 days per month for 3 months commencing after 5 months of contract signing (21 days)	30% of contract sum (i.e., 10% per month based on monthly TA plans)

- on-site advise on adequate dosing using simple methods and development of SOPs ( <i>Deliverable 6</i> )			
Provide final recommendations for water treatment chemicals (provided on a degressive basis), based on review of water production/usage records, revenue data and financial statements and other relevant documents.	Learning note (in UNICEF  <a href="#">Lessons learned production.docx</a> format) on recommendations based on monitoring reports	3 days	5% of contract sum
<p>The consultant will be responsible for:</p> <ul style="list-style-type: none"> <li>• Timely submission of all deliverables</li> <li>• Quality assurance of all final versions of deliverables</li> <li>• Presentation of outputs at key stages to stakeholders</li> <li>• Providing the conceptual framework and direction for the assignment including coordination of the activities, inputs and final recommendations.</li> </ul> <p>Payment will be made based on deliverables as follows: paid on submission and acceptance of relevant reports in line with the prior approved plan as per agreed outputs.</p>			
<b>Estimated Total Consultancy Fees</b>		<b>66 days in a 10-month period</b>	
Travel International (if applicable)	Not applicable	Not applicable	Not applicable
Travel Local (please include travel plan)	Include in overall cost	Applicable	Applicable
Daily subsistence allowance DSA	Include in overall cost	Applicable	Applicable
Communication	Include in overall cost	Applicable	Applicable
<b>Estimated Total Consultancy Fees (Variable)</b>			
<b>Total estimated consultancy costs<sup>i</sup></b>			
<b>Minimum Qualifications required</b>			
<p><b>Qualifications</b></p> <input type="checkbox"/> Bachelors <input checked="" type="checkbox"/> Masters <input type="checkbox"/> PhD <input type="checkbox"/> Other	<ul style="list-style-type: none"> <li>• The consultant should possess a Masters' Degree in Civil or Chemical Engineering, Water and Sanitation, or in a related field.</li> </ul> <p>Interested consultants should clearly demonstrate:</p> <ul style="list-style-type: none"> <li>• At least 10 years of professional experience in the water, sanitation, and hygiene (WASH) sector.</li> </ul>		
<b>Enter Disciplines:</b>			



<p>See requirements provided</p>	<ul style="list-style-type: none"> <li>• At least 5 years field experience working in or very closely with a commercial utility in Zambia. Work experience in a CU is an advantage.</li> <li>• To have performed at least 3 similar consultancies – strategy development, procurement, and monitoring of water treatment chemicals. Examples to be included in the proposal.</li> <li>• Good reputation in the WASH sector</li> <li>• Proven leadership experience with Project Management and ability to achieve quality results, on time, and within budget.</li> <li>• Ability to coordinate a range of diverse actors (including senior government officials) and activities to achieve a common objective</li> <li>• Should be resident in Zambia</li> </ul>
<p><b>Administrative details:</b>          Visa assistance required: <input type="checkbox"/>          Transportation arranged by the office: <input type="checkbox"/>          The Financial bid should comprise an indication of the <u>full cost of delivering the task</u>. The Financial Bid should include breakdown of professional fees/remuneration, other administrative and travel costs, and miscellaneous expense etc. for each phase (phase 1 sustainable chemical strategy and phase 2 capacity support and monitoring) and each of the target locations. It should be noted that this assignment is need-based and hence the inputs to be provided by the expert and sites to be visited may vary. This aspect should, therefore, be given due consideration. All-inclusive proposal must include a daily rate for professional fee that includes subsistence allowance, and unit rates for vehicle hire, and mileage charge per kilometer.</p> <p>All proposals must be in United States Dollar (US\$) or Local currency (ZMW). Travel and accommodation costs need to be built into total budget. Costs for accommodation, meals and incidentals shall not exceed applicable daily subsistence</p>	<p><input checked="" type="checkbox"/> Home Based <input type="checkbox"/> Office Based:          If office based, seating arrangement identified: <input type="checkbox"/>          IT and Communication equipment required: <input type="checkbox"/>          Internet access required: <input type="checkbox"/>          Consultant will include cost of travel and accommodation for field trips.          Other general conditions to apply are as follows:</p> <ul style="list-style-type: none"> <li>• The consultant shall arrange his/her own workspace, office equipment, supplies, etc.</li> <li>• Expected expenses should be part of the submitted quotation/estimates</li> <li>• iii. Except for the costs included in the financial proposal, UNICEF will not pay for any other expenses incurred when implementing this assignment.</li> </ul>

allowance (DSA) rates, as promulgated by the International Civil Service Commission (ICSC).	
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<sup>i</sup> Costs indicated are estimated. Final rate shall follow the “best value for money” principle, i.e., achieving the desired outcome at the lowest possible fee. Consultants will be asked to stipulate all-inclusive fees, including lump sum travel and subsistence costs, as applicable.

Payment of professional fees will be based on submission of agreed deliverables. UNICEF reserves the right to withhold payment in case the deliverables submitted are not up to the required standard or in case of delays in submitting the deliverables on the part of the consultant

**Text to be added to all TORs:**

Individuals engaged under a consultancy or individual contract will not be considered “staff members” under the Staff Regulations and Rules of the United Nations and UNICEF’s policies and procedures, and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.