

**Scope of Work (SOW)**  
**Baruto Toilet Rapid Idea Testing Fund**  
**Sanitation Engineer Consultant**

<b>Consultant Name</b>	TBD
<b>Country</b>	Zambia
<b>Locations</b>	Western Province – Mongu and Nalolo
<b>Consultancy Type</b>	Fixed Price
<b>Period of Performance</b>	March 18 – 30 June, 2024
<b>Consultant Point of Contact</b>	USAID Expanding Water and Sanitation Service Delivery Lead
<b>Charge Code</b>	0272400.050.005

## 1. Background

The primary goal of Introducing the innovative BARUTO I and II toilet designs, is to improve the traditional method of constructing toilets and address the critical issues of collapsing, siltation, safety and ground water contamination, that severely limit toilet construction and use. The BARUTO design responds to the Expanding Water and Sanitation project need to provide basic, sustainable sanitation to the Western Province targeted districts' populations, that have the highest rates of open defecation. The idea also builds on the local practice of using basket lined baskets, which is familiar for the local people (thus facilitating large scale uptake) and that can be readily and affordably found in the area (thus requiring less effort to set up an adequate sanitation chain

### ***Contextual Data/Information***

This Baruto toilet rapid idea testing program supplements the USAID Expanding Water and Sanitation target of delivering sustainable and effective toilet designs that addresses the challenges faced by rural communities, ultimately improving sanitation access, safety, and environment.

The idea of BARUTO toilet designs holds significant importance in sanitation sector because the BARUTO toilet designs are user friendly and culturally appropriate in which the communities were engaged in design process leading to better acceptance and adherence to using toilets. In addition, the designs are well-thought-out that considers long-term sustainability by considering the availability of the local materials, easy to construct, ensuring continued functionality.

## 2. Purpose and Justification of Activity

This is a short-term technical assistance consultancy to support the refining and strengthening of the designs of Baruto I and Baruto II toilet designs. The Sanitation Engineer shall further supervise the implementation of the Baruto Toilet Rapid Idea Testing program in Western Province.

This Sanitation Engineer will contribute to the target of delivering sustainable and effective toilet designs that addresses the challenges faced by rural communities, ultimately improving sanitation access, safety, and environment.

### 3. Specific Tasks/Planned Activities

The Research Triangle Institute International seeks an experienced Sanitation Engineer with demonstrated experience in the design and supervision of rural toilet construction. The Sanitation Engineer will work in Mongu and Nalolo District of Western Province, in coordination with the Service Delivery Lead (SDL), Western Provincial Lead and Service Delivery Coordinator. The candidate will provide a weekly report to the SDL in addition to regular execution of the consultancy assignment.

### 4. Expected Deliverables (outputs):

**The Sanitation Engineer will be required to meet the following deliverables:**

- Review Baruto I and II toilet designs and recommend specific adjustments, where necessary, to improve effectiveness, reliability, sustainability and affordably.
- Review and approve design package developed by the Architect that will be identified. The design package will consist of technical drawings, technical specifications, material requirements and any other design requirements for construction of Baruto toilets.
- Verify compliance with relevant safety standards and guidelines.
- Conduct testing to validate structural integrity, resistance to collapsing, and effectiveness in preventing siltation and groundwater contamination.
- Create comprehensive construction guidelines and teaching aids.
- Support/ provide input for the marketing materials for the awareness campaigns.
- Submit weekly progress reports to Service Delivery Lead.
- Attend the bi-weekly team Meeting and provide input and guidance.

### 5. Milestone Based Payment Schedule

The offeror (Consultant) is required to propose duration (level of effort) and cost of activities broken down into activities detailed below:

S/N	Deliverable/Activity Description	Means of Verification	Due Date	Amount (USD)
1	Review Baruto I and II toilet designs	Report highlighting review of Baruto I and II toilet designs and recommendations of specific adjustments, where necessary, to improve effectiveness, reliability,	29 <sup>th</sup> March	TBD during Negotiation

		sustainability and affordably by toilet design.		
2	Review and approve design package developed by the Architect that will be identified.	Provide written approval of technical drawings, technical specifications for construction and materials. Provide comments to A&E firm as necessary.	15 <sup>th</sup> April	TBD during Negotiation
3	Verify compliance with relevant safety standards and guidelines.	Report demonstrating the verification of compliance with relevant safety standards and guidelines. At a minimum the report should outline the minimum safety standards and how they apply to the designs and construction.	31 <sup>st</sup> May	TBD during Negotiation
4	Conduct testing to validate structural integrity, resistance to collapsing, and effectiveness in preventing siltation and groundwater contamination.	Report demonstrating the testing to validate structural integrity, resistance to collapsing, and effectiveness in preventing siltation and groundwater contamination. The report must outline the methodology for conducting the test and associated results and recommendations. The report should include pictures of the testing exercise.	31 <sup>st</sup> May	TBD during Negotiation
5	Create comprehensive construction guidelines and teaching aids.	Comprehensive construction guidelines and teaching aids that provide the key steps of constructing the rural toilet which visual aids that make it easy for rural communities to follow.	15 <sup>th</sup> June	TBD during Negotiation
6	Support/ provide input for the marketing materials for the awareness campaigns.	Report on Support/ provide input for the marketing materials for the awareness campaigns.	30 <sup>th</sup> June	TBD during Negotiation
7	Attend the bi -weekly team Meeting and provide input and guidance.	Attendance verified by Zambia Service Delivery Lead in weekly notes	Bi -Weekly	TBD during Negotiation
8	Prepare weekly progress reports to the SDL	Written weekly summaries in Microsoft Word, sent to Service Delivery Lead.	Weekly	TBD during Negotiation
<b>Total Fixed Price Amount</b>				<b>K</b>

All work must be completed within this timeframe. The Consultant shall request any modifications or extensions from RTII in advance for review and discussion.

## **6. Terms & Conditions:**

***Working Arrangements:*** The consultant will perform the work from Mongu and Nalolo district and partly from their home, and thus shall be required to work with the team via video chat software such as Zoom, Teams, or Skype using his/her own equipment.

***Estimated Start Date:*** March 18, 2024

***Period of Performance:*** March 18 – June 30 2024

***Locations:*** The consultant will perform their work from Mongu District and partly in Nalolo

## **7. Travel and Logistics**

To be included in Consultancy rates and finalized as part of negotiations.

## **8. Point of Contacts:**

The consultant will work closely with both the Chief of Party and Service Delivery Lead throughout the assignment. The Service Delivery Lead will serve as the primary point of contact for the consultant.

## **9. Qualifications:**

- Minimum 8 years of progressive experience in sanitation engineering, construction, or other relevant field
- Bachelor's degree in engineering.
- Excellent communications skills (both written and verbal).
- Excellent attention to detail, able to meet deadlines and produce quality documents.
- Excellent Microsoft Office skills, especially with Microsoft Word.
- Zambia experience preferred.

## **Knowledge, Skills, and Abilities:**

- Ability to work effectively in a multi-cultural, multi-disciplinary team.
- Fluent and superior English written and verbal communication skills, including expertise writing and editing reports and communications products for a USAID audience.

- Able to work effectively with the Microsoft office suite (Word, Excel, PowerPoint) and Adobe.

## **10. Application Guidelines**

Interested Consultants must submit an updated CV and technical proposal outlining their approach and anticipated cost per deliverable as described in section 5 of this scope of work. Please include an excel version outlining the details of the anticipated cost. All applications must be emailed to [BarutoToiletIRD@rti.org](mailto:BarutoToiletIRD@rti.org). Please quote “Baruto Toilet – Sanitation Engineering Consultant” on the subject line. All applications are due **March 12, 2023, at 5:00 PM** Lusaka time.