

Supplemental Initial Environmental Examination (IEE)
Partners for Development
Rural WASH Sector Support in Abia and Cross River States, Nigeria
Water and Development Alliance II (WADA-II Nigeria Project)

Activity/Project Title: Rural WASH Sector Support in Abia and Cross River States, Nigeria		Solicitation #: <i>TBD</i>
Contract/Award Number (if known): AID-OAA-A-16-00027 "Water and Development Alliance II"		
Geographic Location: Cross River and Abia States, Nigeria		
Originating Bureau/Office: <i>E3/W</i>		
Supplemental IEE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	DCN and date of Original document: Nigeria WADA SIEE.	
Amendment: <input type="checkbox"/> Yes <input type="checkbox"/> No	E3 DCN: DCN E3-17-14, dated: 11/22/2016 (E3 BEO)	
Programmatic IEE: <input type="checkbox"/> Yes <input type="checkbox"/> No	DCN and ECD link(s) of Amendment(s):	
Amendment No.:		
Funding Amount: \$2 million (\$1M USAID, \$1M Coca-Cola)	Life of Project Amount: \$2 million	
Implementation Start/End: FY 2016/FY 2018		
Prepared By: Partners for Development, in consultation with GETF, USAID/Nigeria, and the WADA AOR.	Date Prepared: October 12, 2016	
Expiration Date (if any): September 30, 2018	Reporting due dates (if any): Annual EMMR	
Environmental Media and/or Human Health Potentially Impacted (check all that apply): None <input type="checkbox"/> Air <input type="checkbox"/> Water <input checked="" type="checkbox"/> Land <input type="checkbox"/> Biodiversity <input type="checkbox"/> Human Health <input checked="" type="checkbox"/> Other <input type="checkbox"/>		
Recommended Threshold Determination: <input checked="" type="checkbox"/> Negative Determination <input checked="" type="checkbox"/> with conditions <input checked="" type="checkbox"/> Categorical Exclusion <input type="checkbox"/> Positive Determination	<input type="checkbox"/> Deferral: <input type="checkbox"/> Exemption <input type="checkbox"/> USG Domestic NEPA action	
Climate Change: <input checked="" type="checkbox"/> GCC/Adaption <input type="checkbox"/> GCC/Mitigation <input type="checkbox"/> Climate Change Vulnerability Analysis (included) Adaptation/Mitigation Measures: Purpose of activity is to improve sustainable water access for people, economies, and the environment which may include climate analyses, and appropriate watershed protection, conservation and efficiency measures. CRM analysis not performed in this SIEE.		
Other Relevant Environmental Compliance Documentation <ul style="list-style-type: none"> TCCC/USAID Water and Development Alliance (WADA) Global Development Alliance. http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/38576.pdf. Valid through the end of WADA I, August 30, 2017. 		

PURPOSE AND SCOPE OF THE IEE

The purpose of this document, in accordance with Title 22, Code of Federal Regulations, Part 216 (22 CFR 216), is to provide a preliminary review of the reasonably foreseeable effects on the environment as well as recommended Threshold Decisions, for the Water and Development Alliance II (WADA-II Nigeria Project). The functional objective of this project is to address the water supply and sanitation needs of rural Nigerian populations with a focus on achieving sustainable results while reaching the maximum vulnerable population. This document makes a determination, per 22 CFR 216, and, as appropriate, identifies attendant conditions, for these activities. Upon final approval of this SIEE, these recommended determinations are affirmed as

22 CFR 216 Threshold Decisions and Categorical Exclusions, and conditions become mandatory elements of its implementation.

This SIEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation, and fulfills the requirement of WADA II's Programmatic Initial Environmental Examination (PIEE).

SUMMARY OF GENERAL PROJECT IMPLEMENTATION AND MONITORING REQUIREMENTS

USAID and the implementing partners (IPs) must fully implement the general implementation and monitoring requirements specified in Section 4 of the attached IEE. In summary, the implementation and monitoring requirements include:

- Briefings on environmental compliance responsibilities;
- Development and implementation of environmental mitigation and monitoring plans (EMMPs);
- Submission of annual reporting via an Environmental Mitigation and Management Report (EMMR);
- **Submission of a Water quality assurance plan (WQAP).** Prior to drinking water provision, the project will prepare and receive approval for a Water Quality Assurance Plan (WQAP). The WQAP will be prepared in consultation with the cognizant AOR/COR and/or Activity Manager. Its purpose is to ensure that all new and rehabilitated USAID-funded sources of drinking water provide water that is safe for human consumption. The completed WQAP must be approved by: the AOR/COR and/or Activity Manager; the MEO; the REA, **and the BEOs for AFR & E3.** Review and clearance in DC is a compromise that allows us to make certain the WQAP is sufficiently protective, while avoiding an EA. Please confer with the BEOs about further guidance on when to develop the WQAP. Typically, it is at the planning stage when sufficient detail is available. Integration of compliance responsibilities in prime and sub-contracts and grant agreements;
- Assurance of sub-grantee and sub-contractor capacity and compliance;
- USAID team monitoring responsibility - monitoring and evaluation;
- New or modified activities; and,
- Compliance with host country requirements.

Section 4 of the IEE also establishes the responsibilities of the A/COR/Activity Manager.

The full narrative SIEE is attached as an annex to this Approval Document.

Annexes to the SIEE:

Annex A: Environmental Review Form for Program Subprojects/Subgrants

Annex B: ENVIRONMENTAL MONITORING AND MITIGATION PLAN (EMMP)

**Annex C: ENVIRONMENTAL MONITORING AND MITIGATION REPORT (EMMR)
GUIDANCE**

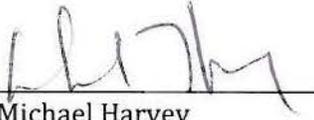
Annex D: CLIMATE RISK SCREENING MATRIX [not an actual CRM matrix resulting from specific analysis of Nigeria WADA SIEE]

**Annex E: WADA Rural WASH Sector Support in Abia and Cross River States
Implementation Plan**

**APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED FOR
Water and Development Alliance II (WADA-II Nigeria Project)**

CLEARANCE:

Mission Director:



Michael Harvey

Date: 10/13/18

CONCURRENCE :

AFR Bureau
Environnemental
Officier:

Brian Hirsch

Date: _____

E3 Bureau
Environmental
Officer:

Teresa Bernhard

Date: _____

ADDITIONAL CLEARANCES:

Agreement Officer
Representative:
USAID/Washington

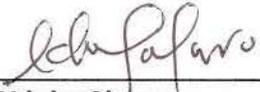
Katherine Sill

Date: _____

**CLEARANCE FOR ENVIRONMENTAL ACTION RECOMMENDED FOR
Water and Development Alliance II (WADA-II Nigeria Project)**

CLEARANCE:

Mission Environmental
Officer:



Nduka Okaro

Date: 10/13/16

Mission Activity
Officer:



Joachim Ezeji

Date: 10-13-16

**APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED FOR
Water and Development Alliance II (WADA-II Nigeria Project)**

CLEARANCE:

Mission Director: _____/s/_____
Michael Harvey Date: 10/13/2016

Deputy Mission Director: _____
Aler Grubbs Date: _____

Resident Legal Officer: _____
Michael Behan Date: _____

Supervisory Program Officer: _____
Eric Holleran Date: _____

Director – Economic Growth & Environment Office: _____
Roseann Casey Date: _____

Mission Environmental Officer: _____/s/_____
Nduka Okaro Date: 10/13/2016

CONCURRENCE :

AFR Bureau Environnemental Officier: ___ e-mail clearance with comments ___
Brian Hirsch Date: 11/17/2016

E3 Bureau Environmental Officer: ___e-mail clearance with comments___
Teresa Bernhard Date: 11/22/2016

ADDITIONAL CLEARANCES:

Agreement Officer Representative: _____e-mail clearance _____
USAID/Washington Katherine Sill Date: 10/13/2016

Mission Activity Officer: _____/s/_____
Joachim Ezeji Date: 10/13/2016

Record of Africa Bureau and E3 Bureau BEO Clearances

Nigeria WADA SIEE October – November 2016

AFR BEO clearance (Nov. 17, 2016):

On Thu, Nov 17, 2016 at 5:46 PM, Brian Hirsch <bhirsch@usaid.gov> wrote:

Hi James -- Sorry for the delay on this. I've been talking with Teresa Bernhard, BEO for E3 and co-signer of this IEE, along with others, and we're just about finished with our deliberations and comments.

I believe the main comments are these:

- The threshold determination is negative, with some mitigating conditions. We went around a bit on the question of whether it should be a Positive Determination, but the small-scale nature of all the individual interventions convinced us that it can be given a Negative Determination, and therefore that a full Environmental Assessment is not necessary.
- The main change to the mitigations we want to request is that the WQAP be approved by the AFR and/or E3 BEO, in addition to the other clearances (AOR, MEO, REA) mentioned. Review and clearance in DC seems like a decent compromise that allows us to make certain the WQAP is sufficiently protective, while avoiding an EA.

... [T]hat's the bulk of the substance I believe you can expect. You can consider this effectively my clearance with comments. Since WADA is an E3-managed agreement, you really need to have Teresa Bernhard's clearance as well.

Please advise if any questions. ...

Thanks.

Brian Hirsch
Bureau Environmental Officer / Environment Team Lead
USAID/AFR/SD/EGEA; RRB 4.06-117; [202-712-5613](tel:202-712-5613); bhirsch@usaid.gov

E3 BEO Clearance (Nov. 22, 2016)

From: Teresa Bernhard [mailto:tbernhard@usaid.gov]

Sent: Tuesday, November 22, 2016 6:52 AM

To: Brian Hirsch <bhirsch@usaid.gov>

Cc: James Lykos <jlykos@usaid.gov>; Katherine Sill <ksill@usaid.gov>; Daniel Nover <dmnover@gmail.com>; Joachim Ezeji <jezeji@usaid.gov>; Robertson, Amanda (AFR/SD/EGEA:USDA) <arobertson@usaid.gov>; AFRBEO-Support <AFRBEO-support@cadmusgroup.com>; Walter Knausenberger (AFR/SD) <wknausenberger@usaid.gov>

Subject: Re: SIEE for WADA project in Madagascar; AFR/E3 BEO guidance

My clearance is contingent on the inclusion of the workplan (a document that was sent along with the IEE) to the IEE as an annex. It includes more information that is required to justify the determination.

Please add to the text of the document, in the background section, that more information about the project can be found in the annex.

Thank you,

Teresa Bernhard
E3 Bureau Environmental Officer
USAID
Phone: (w) [202-712-4313](tel:202-712-4313)
(c) [443-744-2200](tel:443-744-2200)
email: tbernhard@usaid.gov

**SUPPLEMENTAL INITIAL ENVIRONMENTAL EXAMINATION
Water and Development Alliance II (WADA-II Nigeria Project)**

Program Data:

Program/Activity Number: **AID-OAA-A-16-00027**
Program/Activity Title: **Water and Development Alliance II
(WADA-II Nigeria Project)**
Country/Region: **Nigeria**
Functional Objective: To support the governments of Cross River and Abia states to improve and expand access to safe, affordable, sustainable and reliable water and sanitation services in rural communities
Number & Name: **AID-OAA-A-16-00027 & Rural WASH Sector Support in Abia and Cross River States**
Program Areas: **Water, Sanitation and Hygiene**
SIEE Period covered: **FY 2016 – FY 2018**
Life of Project Amount: **\$2 million including: \$2,000,000 of WADA contribution (including \$1,000,000 of USAID funds and \$1,000,000 of TCCAF funds)**

1.0 BACKGROUND AND ACTIVITY/PROGRAM DESCRIPTION

1.1 Purpose and Scope of SIEE

The purpose of this document is to provide a preliminary review of the reasonably foreseeable effects on the environment of activities described herein. The document outlines project activities, identifies possible impact on the environment of these activities and suggests appropriate mitigation measures to minimize the impact of these activities on the environment as recommended by the Nigeria National Policy on the Environment. The SIEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation in Nigeria.

1.2 Background (Context and Justification)

Rural WASH Sector Support in Abia and Cross River States is a project under the Water and Development Alliance II (WADA II) Global Development Alliance (GDA) jointly funded by USAID and Coca-Cola to support a wide range of water-related activities in priority countries or regions targeted by both partners. This is the third WADA project implemented in Nigeria, the first two were implemented under the predecessor WADA GDA. The Global Environment & Technology Foundation (GETF) has and will continue to facilitate the Alliance centrally, and provide and manage Partners for Development for the implementation of the Nigeria project.

USAID/E3/W administers central Alliance funding through a Cooperative Agreement with GETF. USAID Missions have the option to buy-in to the mechanism to fund country-specific projects.

The interventions funded through Rural Water, Sanitation, and Hygiene (WASH) Sector Support in Abia and Cross River States will advance U.S. Government development objectives in the international water sector, while also supporting Coca-Cola's goals related to global water stewardship, environmental compliance, risk management, and social responsibility. The project is designed to

contribute to improving access to water resources and sanitation for the world's poor and advancing the capacity to undertake Integrated Water Resources Management (IWRM). After a competitive review process, Partners for Development (Pfd) was selected as the sub awardee to implement Rural WASH Sector Support in Abia and Cross River States and will support the governments of Cross River and Abia states to improve and expand access to safe, affordable, sustainable and reliable water and sanitation services in rural communities 2016 – 2018.

Abia State has a population of 2,83 million in 17 Local Government Areas (LGA). The state Rural Water and Sanitation Agency (RUWASSA) mandate is to coordinate and manage rural water supply and sanitation activities and projects in the LGAs; however, the LGAs do not have established water environment and sanitation (WES) units or Water, Sanitation, and Hygiene Committees (WASHCOMs). The state RUWASSA is not adequately staffed or funded and is still embedded within the Ministry of Agriculture. Most rural dwellers rely on streams and wells for their domestic water needs. Communities living in the coastal plain sand areas experience acute water shortage between November and March when wells and water ponds ebb significantly. In the area of water supply, the state is engaged in the constant maintenance of existing water works while also opening up new regional water schemes in various communities. The state does not have a water and/or sanitation policy or framework in place. Open defecation is almost exclusively practiced in all the communities in the selected LGAs of Isuikwuato and Ohafia.

Cross River State (CRS) has a population of 2.89 million in 18 LGAs. According to the Cross River Road Map to Open Defecation Free (ODF) status (2013), estimated statistics showed there were 1,841 public places without toilets. The CRS Ministry of Water Resources oversees water related functions with the overall mandate to coordinate and manage water resources in the State. The Ministry's main focus is the facilitation of access to adequate and affordable clean water supply to all the citizens of CRS with a sustainable approach, and community mobilization for greater sustainability. RUWASSA¹ also constructs VIP and low cost SanPlat latrines and carries out health education and promotion. LGAs through the WASH unit/department also have responsibility for the provision of potable water to rural communities in their area of jurisdiction.

Software sanitation activities of CRS RUWASSA for the year 2015 – 2016 have been in collaboration with EU/UNICEF and Concern Universal through the Rural Sanitation and Hygiene Promotion in Nigeria (RUSHPIN) and Community Led Health Improvement through Sanitation and Hygiene Promotion in Nigeria (CHISHPIN) Programmes.

Each of the 18 LGAs in the state has a Water Supply and Environmental Sanitation (WES) department that is involved in the formation and management of WASHCOMs and plays a key role in community mobilization and sensitization and establishment of project management structures. The LGA WASH departments equally play a key role in facilitation of community-led project implementation processes and activities, monitoring and evaluation, and reporting. However, most of the LGA and community WASH structures are not effective, resulting in poor ownership and sustainability, non-functional water facilities, poor water supply, and sanitation practices including open defecation in some communities of Obubra and Odukpani LGAs.

¹ Throughout this document, Pfd will use RUWASSA for the sake of consistency. However, it is important to note that Abia State uses the acronym RUWASSA while Cross River State used the acronym RUWATSA. The two acronyms stand for the same thing: Rural Water Supply and Sanitation Agency

1.3 Summary of Illustrative Activities

PfD will support the State Governments of Cross River and Abia to improve and expand access to safe, affordable, sustainable and reliable water and sanitation services in 40 rural communities across four LGAs (please reference maps below). The project will:

- Conduct baseline (as well as hydrogeological) survey of rural communities in project LGAs (local government areas) in Abia and Cross River states to select communities for interventions.
- The project will construct/rehabilitate 64 boreholes with handpumps in 40 rural communities of Abia and Cross River states. Expected beneficiaries include 56,000 with access to water facilities. The baseline and survey activities will inform the breakdown between new construction versus rehabilitation; however, based on initial findings the project anticipates largely rehabilitating existing infrastructure.
- The project will construct/rehabilitate 64 improved sanitation facilities and also encourage households to construct their own sanitation facilities in 40 rural communities of Abia and Cross River states. Expected beneficiaries include 80,000 with access to sanitation facilities, moving away from the currently widespread practice of open defecation. The baseline and survey activities will inform the breakdown between new construction versus rehabilitation; however, based on initial findings the project anticipates largely rehabilitating existing infrastructure. In institutions where there is a budget for emptying soak pits, they will engage sewage companies with appropriate facilities for disposal. Where there is no budget for this, the project will educate such institutions on appropriate and safe waste disposal methods and on emptying such pits. For example, digging a pit of appropriate depth and distant from water sources and emptying the waste from soak pits into it and then covering the waste completely.
- Before construction and to ensure sustainability, community groups (WASHCOMs, Village Level Operations and Maintenance (VLoms), Environmental Health Clubs (EHC)) will be trained by PfD in borehole repair and management and will be capable of managing their boreholes independent of outside assistance and other sanitation and hygiene issues. PfD anticipates training an average of 12 members per WASHCOM.
- The project will also establish new WASHCOMs (where not already in existence) and strengthen the capacity of existing WASHCOMs to drive the implementation of WASH services in their respective communities; as well as EHCs and health care workers (HCW).
- The project will engage RUWASSA and LGA personnel in the two states in developing training materials and workshops for sanitation and hygiene education and behavior change activities in schools and clinics. The tiered and integrated training plan will be developed following the assessments so that it directly responds to the gaps and needs that exist in each state, LGA and community. PfD has recorded successes in utilizing this approach in its UNICEF-supported project in Delta, Edo and Ekiti states.

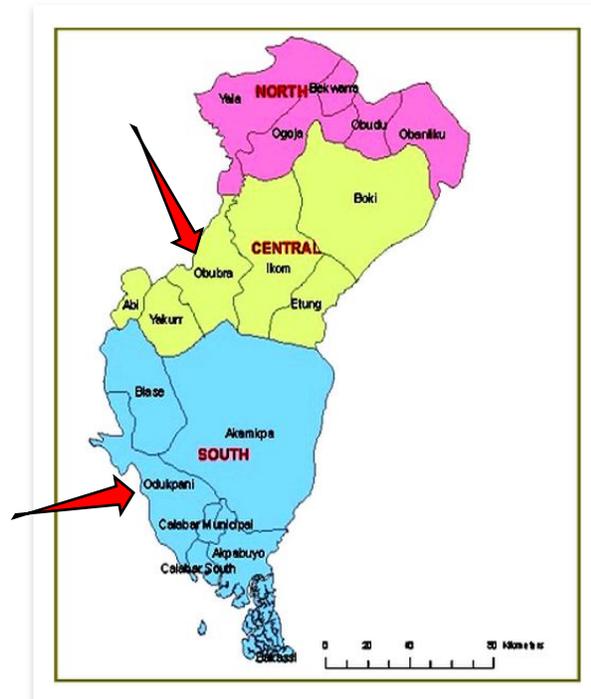
Figure 1. Map of Nigeria



Figure 2. Map of Abia State



Figure 3. Map of Cross River State



Please note that selected LGAs are identified by the red arrows.

In addition to the activities above, Pfd will contract a firm to carry out a hydrogeological survey at the state level. Geophysical investigations involve simple methods of study made on the surface with the aim of ascertaining subsurface detail. This is achieved by measuring certain physical properties and

interpreting them mainly in terms of subsurface geology. This investigation will be aimed at locating and assessing groundwater potential and quality.

The result of the state-wide geophysical survey will include the following:

- Physical Location – Climate; Physiography, Topography And Soils; Regional Geology; Local Geology
- Fieldwork – Hydrogeological Transects; Summary Of Electrical Resistivity Theory; Survey And Results
- Horizontal Electric Profiling (Hep)
- Vertical Electrical Sounding (Ves)
- Aquifer Potential; Sustainable Yield And Water Quality – Hydrogeological Setting; Aquifer Occurrence; Aquifer Characteristics

The community-level geophysical surveys will include:

- Effects of Proposed Borehole – Interference Effects; Borehole Density;
- Water Quality
- Hydrology – Proposed Drilling Site; Proposed Drilling Method

Total beneficiaries: 80,000 (includes overlap)

Of these 80,000 beneficiaries:

- 56,000 improved water access (at the household level)
- 440 economically empowered women (included in the 80,000)
- 80,000 sanitation access (includes improved household & institutional sanitation access)
- 220 economically empowered youth (included in the 80,000)

To determine these numbers PfD used the following averages:

- 6 people/household
- 335 households (avg)/community
- 40 total communities reached

These numbers will be further defined after the assessment and mapping exercises are complete.

The following are the general categories of activities expected to be carried out in Rural WASH Sector Support in Abia and Cross River States, along with a more detailed, but not exhaustive, list of illustrative interventions specifically related to the activity category:

- **Technical Studies and Assessments**
 - Conduct participatory needs assessments for water supply and sanitation services (including household surveys, focus groups, community mapping, and other methods)
 - Assess community water system capacity and condition
 - Conduct hydrogeological analysis (groundwater or surface water) in target areas of project
 - Conduct analysis related to water quality, water pollution, and/or wastewater management
 - Gather, process, manage, and evaluate data of all kinds related to water resources management or water/sanitation service delivery
 - Monitor and evaluate project progress and impact

- **Awareness and Outreach**
 - Conduct community sensitization sessions about a range of water and sanitation sector issues
 - Conduct campaigns to raise awareness about water and sanitation issues, and/or to communicate about the activities of the alliance
 - Develop and/or distribute educational materials on water resources management, natural resources management, water supply services, pollution prevention, hygiene and sanitation or other relevant water sector topics
 - Establish community score card systems for the status and condition of water supply and sanitation infrastructure
 - Develop and disseminate lessons learned and best practices for a range of water and sanitation sector issues

- **Water Sector Governance Strengthening**
 - Facilitate participatory sustainable water resources planning efforts with the involvement of all stakeholders/water users
 - Facilitate or establish sustainable financing mechanisms related to water (e.g., fee systems for water supply, sanitation or wastewater treatment; payment for environmental services schemes; innovative credit or other financing arrangements, etc.)
 - Assist in establishing or strengthening appropriate institutional structures to facilitate equitable decision-making and management of water resources and water supply/sanitation services
 - Provide sound and credible information in a usable form for decision making, planning, and management, including documents and maps
 - Carry out advocacy campaigns for policy reform related to water resources or water supply/sanitation/hygiene issues

- **Small-Scale Water Supply and Sanitation facility construction**
 - a) *Water Supply*
 - Construct or rehabilitate boreholes
 - Install manual hand pump systems
 - Construct or rehabilitate connections to or extensions of networked water supply distribution systems, including installation of tap stands
 - Construct or rehabilitate water storage facilities including cisterns, water tanks, reservoirs, etc.
 - b) *Sanitation*
 - Construct or rehabilitate sanitation facilities (latrines or other components of improved latrines, e.g. soak pits)
 - Construct or rehabilitate hand washing basins
 - Construct or renovate wastewater and/or fecal sludge management drainage or conveyance networks

- **Education, Technical Assistance, and Training**
 - Establish and/or build capacity of water and sanitation committees, community-based organizations, municipal water boards, water utilities, community health volunteers, water

technicians, water point caretakers/attendants, and/or local government officials associated with water supply or sanitation service delivery

- Establish and/or build capacity of water management committees, water users groups, government water sector professionals and/or community-based organizations (CBOs) involved in sustainable water resources management (water quality and quantity)
- Encourage the development and adoption of hygiene and sanitation curriculum in local schools/communities, and build the capacity of teachers and health promoters to implement hygiene behavior change programs
- Develop or strengthen capacity of the community to adopt improved hygiene behaviors in handwashing, sanitation adoption and point-of-use household water treatment.

2.0 BASELINE INFORMATION AND APPLICABLE HOST COUNTRY REQUIREMENTS

Baseline Information

See attached WADA Rural WASH Sector Support in Abia and Cross River States Implementation Plan.

National Environmental Guidelines

Rural WASH Sector Support in Abia and Cross River States will be implemented in Abia and Cross River states both in the South-South region of Nigeria. Project implementation activities – including technical assistances, education, outreach and construction/rehabilitation of small scale water and sanitation facilities - will adhere to outlined national guidelines. Specifically, the project will adhere to the National Policy on the Environment that provides a framework for environmental governance in Nigeria. The policy also prescribes sectoral and subsidiary components needed to undertake or execute tasks necessary for the attainment of the ideals encapsulated in the doctrine of sustainable development as stated in section 20 of the Constitution of the Federal Republic of Nigeria 1999, which provides that the “State shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria.” In addition, Nigeria is party to several international treaties and conventions governing environmental issues.

Based on the objectives and guidelines provided in the National Policy on the Environment, the project shall ensure that:

- environmental aspects are considered in the implementation of project activities;
- an integrated environmental management approach is built into project implementation;
- regular environmental reporting is employed in the management of project;
- the best practicable environmental technologies are applied in project implementation;
- environmental monitoring and auditing is routinely carried out all through project implementation; and;
- there is a periodic review of project interventions for effectiveness and suitability to the National Policy on the Environment and the strategic objectives.

3.0 POTENTIAL ENVIRONMENTAL IMPACTS & RECOMMENDED DETERMINATIONS, INCLUDING CONDITIONS

3.1 Potential Environmental Impacts

Rural WASH Sector Support in Abia and Cross River States in Nigeria and will support the governments of Cross River and Abia states to improve and expand access to safe, affordable, sustainable and reliable water and sanitation services in rural communities 2016 – 2018. Some activities to be supported under this mechanism include, but are not limited to: capacity building, awareness and outreach creation. These activities are unlikely to have any significant adverse impact on the environment. Other activities including, but not limited to: small-scale water supply and sanitation, education, technical assistance, training and water sector governance strengthening, could potentially have negative impact on the environment and shall be appropriately mitigated. Potential impacts of projects under the project could include:

Small-Scale Water Supply and Sanitation

Some potential environmental issues with these interventions depending on target community are:

- *Water Supply*
 - Improper siting of facilities that damages or destroys natural ecosystems
 - Depletion of freshwater resources (surface and groundwater)
 - Conflict over water resource allocation
 - Creation of stagnant (standing) water near water points that could create breeding opportunities for water-borne disease vectors (e.g. mosquitoes)
 - Natural or human-caused biological or chemical contamination of water sources (surface and groundwater), causing increased human health risks, including:
 - High arsenic or other mineral/chemical levels
 - Poor management of water points and/or poor design of pipes leading to leakage and contamination of water with fecal matter, solid waste, etc.
- *Sanitation*
 - Increased human health risks from contamination of surface water, groundwater, soil, and food by human waste and disease pathogens
 - Degradation of stream, lake, and marine water quality and degradation of land habitats, or negative impacts to surface or groundwater quality due to inappropriate siting or construction of latrines, fecal sludge management facilities, wastewater collection systems, or release of human waste from sanitation facilities
 - Defecation around and not in latrines or other sanitation facilities, potentially contaminating surface water and/or shallow groundwater sources, adversely affecting both human and ecosystem health
 - Damage to the aesthetics of the sanitation facility site (visual, smell, etc.)

Education, Technical Assistance & Training and Water Sector Governance Strengthening

Possible environmental issues and impacts associated with these interventions include:

- Elements or sections of these activities related to construction could indirectly result in harmful management practices that are detrimental to the environment

3.2 Determination and Conditions

Pursuant to 22 CFR 216.2(c), the following classes of activities do not have anticipated direct, indirect, or cumulative impacts, and would normally qualify for Categorical Exclusion. These activities are:

Activity	Categorical Exclusion 22CFR 216.2
Technical Studies, Research and Analyses that do not directly, indirectly or cumulatively and adversely impact the environment and society	(iii) Analyses, studies, academic or research workshops and meetings
Education, Technical Assistance and Training and Awareness and Outreach	(i) Education, technical assistance, or training programs, as well as awareness and outreach activities except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.);
Water Sector Governance Strengthening	(xiv) Studies, projects or programs intended to develop the capability of countries to engage in development planning, except to the extent designed to result in activities directly affecting the environment (such as construction of facilities, etc.);

Pursuant to 22 CFR 216 the originator of the proposed Award has determined that a **Negative Determination with Conditions (NDC)** is appropriate for some types of actions described in the document. Such activities have the potential to impact the environment and community. The recommendation, therefore, requires that suitable actions are taken to avoid, minimize and then, as a last resort, mitigate through restoration, rehabilitation or compensation. Supplemental environmental and social impact analysis will be required prior to making a threshold determination. These activities may include but are not limited to:

Activities

- Small scale construction of water infrastructure, including new and rehabilitated boreholes and sanitation facilities in ten communities each in four LGAs
 - Water Supply and Sanitation Activities
 - Small-scale Construction Activities

Activity or intervention sub-category	Recommended Determination
Water Supply and Sanitation Activities	Negative Determination Subject to the following conditions : For small-scale water supply and distribution infrastructure activities (defined as total investment in a given community of less than \$250,000), the conditions are as follows: 1. Good-practice design standards must be implemented for new construction and rehabilitation works, generally consistent with USAID’s <i>Sector Environmental Guidelines: Water Supply & Sanitation</i> : http://www.usaidgems.org/Sectors/watsan.htm .

These standards must be specified in the EMMP and must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, dumps), exclusion of livestock from water points, and prevention of standing water at water supply points.

2. Capacity-building in equipment/system maintenance must be co-programmed with construction/installation of small-scale sanitation infrastructure.

3. For sub-grant or sub-project activities not explicitly detailed in the SIEE, the following will apply. A **Negative Determination** subject to the following **conditions**.

The formal AFR subproject/sub grant review process, as set out by the *AFR Environmental Review Form/Environmental Review Report [ERF/ERR]* (available at www.usaidgems.org/subsidiary.htm) must be completed and approved by the A/COR/Activity Manager and MEO prior to each new sub-grant/sub-project activity (see Annex A).

Water quality assurance plan. Prior to drinking water provision, the project will prepare and receive approval for a Water Quality Assurance Plan (WQAP). The WQAP will be prepared in consultation with the cognizant AOR/COR and/or Activity Manager. Its purpose is to ensure that all new and rehabilitated USAID-funded sources of drinking water provide water that is safe for human consumption. The completed WQAP must be approved by: the AOR/COR and/or Activity Manager; the MEO; the REA, **and the BEOs for AFR & E3**.

- Once approved, the WQAP must be implemented in full, and for the duration of drinking water activities. Implementation must include testing of water prior to making the supply point available to beneficiaries.
- The WQAP constitutes a key element of the project's EMMP. As with all other elements of the EMMP, project budgets, workplans, and staffing plans must provide for its full implementation. The approved WQAP must include at minimum the following sections:
 - Project information (name of project, name of IP, period of performance, contact information, name of COR/AOR)
 - A description of the drinking water points to be subject to the WQAP (approximate numbers, water source(s), technology(ies), general geographic area and installation context).
 - An inventory of applicable water quality standards, including those promulgated by USAID, as well as the cognizant host-country regulatory entity/entities. (The World Health Organization [WHO] *Guidelines for Drinking-water Quality* may be substituted for host-country standards that are not accessible, unclear or outdated.)
 - The responsible parties/entities/institutions, under host country law or policy, for monitoring and managing water quality of the water points subject to this WQAP. If other than the IP, a summary assessment of their capacity and their involvement.
 - A technical assessment of the equipment, resources and expertise that

	<p>will be required to monitor and report on compliance with applicable water quality standards. This should include, for example, sampling materials, reagents, transportation, storage, laboratory facilities and capacity, communications, training or certification criteria, etc.</p> <ul style="list-style-type: none"> ○ Protocol for initial testing and ongoing monitoring of water quality, to include: <ul style="list-style-type: none"> ▪ contaminants for which initial testing and ongoing monitoring will be conducted ▪ water quality assessment methods, including test type and frequency ▪ data management and reporting; the project must maintain a central registry of monitoring results by water point and date; GPS coordinates for water points are expected ▪ designation of ‘responsible party’ for each aspect of protocol ▪ response procedures in the event water does not meet water quality standards ○ Justification for NOT testing to any applicable standard ○ Sustainability strategy to the extent that responsibility for longer-term water quality assurance will transition in part or whole to project partners or beneficiaries. A summary assessment of the capacity of these partners, and any capacity building to be undertaken <ul style="list-style-type: none"> • The WQAP should follow any applicable USAID guidance, as well as local laws, regulations and policies.
<p>Small-scale Construction Activities (less than 1,000 m² total disturbed area) with no complicating factors.</p>	<p>Negative determination, subject to the following conditions:</p> <ol style="list-style-type: none"> 1) No complicating factors. The site is not within 30m of a permanent or seasonal stream or water body, will NOT involve displacement of existing settlement/inhabitants, has an average slope of less than 5 percent and is not heavily forested, in an otherwise undisturbed local ecosystem, or in a protected area; 2) Construction will be undertaken in a manner generally consistent with the guidance for environmentally sound construction, provided in the Small Scale Construction chapter of the USAID <i>Sector Environmental Guidelines</i>. (http://www.usaidgems.org/sectorGuidelines.htm) At minimum, (a) During construction, prevent sediment-heavy run-off from cleared site or material stockpiles to any surface waters or fields with berms, by covering sand/dirt piles, or by choice of location. (Only applies if construction occurs during rainy season.); (b) Construction must be managed so that no standing water on the site persists more than 4 days; (c) IPs must require their general contractor to certify that it is not extracting fill, sand or gravel from waterways or ecologically sensitive areas, nor is it knowingly purchasing these materials from vendors who do so; (d) IPs must identify and implement any feasible measures to increase the probability that timber is procured from legal, well-managed sources. 3) Asbestos. If the presence of Asbestos is suspected in a facility to be renovated, the facility must be tested for asbestos before rehabilitation works begin. Should asbestos be present, then the work must be carried out in conformity with host country requirements, (if any) and in

	<p>conformity with guidance to be provided by the MEO, in consultation with the REA. All results of the testing for asbestos shall be communicated to the C/AOR.</p> <p>4) Paint. No lead-based paint shall be used. When lead-free paint is used, it will be stored properly so as to avoid accidental spills or consumption by children; empty cans will be disposed of in an environmentally safe manner away from areas where contamination of water sources might occur; and the empty cans will be broken or punctured so that they cannot be reused as drinking or food containers.</p> <p>5) Waste handling equipment and infrastructure. USAID intervention must result in the facilities' possessing adequate provision for handling the wastes they may generate; including human wastes.</p> <p>6) For sub-grant or sub-project activities not explicitly detailed in the SIEE, the following will apply. A Negative Determination subject to the following conditions.</p> <p>The formal AFR subproject/sub grant review process, as set out by the <i>AFR Environmental Review Form/Environmental Review Report [ERF/ERR]</i> (available at www.usaidgems.org/subsidiary.htm) must be completed and approved by the A/COR/Activity Manager and MEO prior to each new sub-grant/sub-project activity (see Annex A).</p>
<p>Small-scale construction larger than 1,000 m² total disturbed area or with one or more complicating factors</p>	<p>Negative determination, subject to the following conditions:</p> <ol style="list-style-type: none"> 1. The formal AFR subproject/subgrant review process, as set out by the AFR Environmental Review Form (ERF; available at http://www.usaidgems.org/Documents/ComplianceForms/AFR/AFR-EnvReviewForm-20Dec2010.doc) must be completed and approved by the COR/AOR, MEO and REA prior to construction. 2. The IP must assure implementation of any mitigation and monitoring conditions specified by the approved ERF; and, 3. The environmental management conditions established by the ERF process must be consistent with the conditions for “very small scale construction” enumerated immediately above and, at minimum, consistent with achieving a “no issues” result under application of the ENCAP Visual Field Guide for Small-Scale Construction.

4.0 IMPLEMENTATION AND MONITORING CONDITIONS

WADA II anticipates activities that may have the potential for adverse environmental and social impact, such as small-scale water-related or water resource management activities that involve construction. Activities that have the potential for adverse environmental or social impacts require supplemental analysis prior to initiation of those activities. In addition to the specific conditions enumerated in Section 3, the negative determinations recommended in this SIEE are contingent on full implementation of the following general monitoring and implementation requirements:

1. **Categorically Excluded Activities:** For those activities that are candidates for a categorical exclusion as outlined in the above document, the AOR will send an email to the E3 BEO outlining the activity and the justification for the CE. The E3 BEO will send a return email of concurrence or request for reconsideration. If reconsideration is requested, the AOR and E3 BEO and relevant regional BEO will resolve the request or elevate the request to the Agency Environmental Coordinator for resolution.

2. **Activities with Potential Adverse Environmental and Social Impacts:** Those activities not categorically excluded, including those activities and programs included in the primary award, will require additional environmental analysis such as a supplemental IEE or a scoping statement and environmental assessment, as described in 22 CFR 216.

3. **Annual Summary Report:** The primary award for WADA II will, on an annual basis, submit a report that outlines past activities and the environmental analysis performed, and a summary of the results of that analysis (negative determination, negative determination with conditions, positive determination or a categorical exclusion). The report will also outline the potential activities that may be awarded in the future. That report will be submitted to the E3 and Regional BEO for review.

4. **Environmental Mitigation and Monitoring Plans:** For each major activity under this GDA that does not qualify for a categorical exclusion, and as part of the supplemental environmental analysis and threshold determination, an Environmental Mitigation and Monitoring Plan (EMMP, Annex B) will be completed by the implementing partner and submitted to the AOR, the E3 Bureau Environmental Officer (BEO), the Mission Environmental Officer, the Pillar Bureau Environmental Officer and, as appropriate, the Regional Environmental Officer for their approval prior to expenditure of funds on that activity.
 - a. Mitigation measures and monitoring criteria found in the EMMP shall be incorporated into pertinent Performance Management Plans and annual workplans.
 - b. The implementing partners' annual workplan will identify those activities outlined in the supplemental IEE that have potential impacts to the environment and discuss plans for environmental management, mitigation approaches, and monitoring measures. Implementing partners will be required to include Environmental Compliance Monitoring in their project workplan and monitoring and evaluation plan.
 - c. Operating Units will ensure that implementing partners have sufficient capacity to implement mitigation and monitoring measures.
 - d. The EMMP must be stored in project files and the environmental compliance database. An evaluation of the implementation of the EMMP must be part of the mid- and end-of-project evaluations.
 - e. Operating Units will ensure that implementing partners have sufficient capacity to implement mitigation and monitoring measures.
 - f. No funds may be expended prior to the submission of the supplemental analysis and EMMP on those workplan activities deemed to have potential adverse impacts. Awards will stipulate the condition that 22 CFR 216 requirements must be concluded precedent to the expenditure of funds.

5. **Environmental Mitigation and Monitoring Report:** Implementing partners will complete an annual environmental mitigation and monitoring report (EMMR).
 - a. The EMMR should be submitted to the AOR by with the quarterly and be reviewed and approved by the E3 and relevant Regional MEO.
 - b. The EMMR will record the environmental mitigation and monitoring measures outlined in the EMMP and will indicate the activities used to ensure that those measures were implemented.
 - c. Based on the process outlined in the annual workplan, the implementing partners' annual reports to USAID will include brief updates on mitigation and monitoring measures being implemented, results of environmental monitoring, and any other major modifications/revisions in the development activities, and mitigation and monitoring procedures (see Annex B). The EMMR will also identify issues and challenges associated with the implementation of the EMMP.
 - d. The EMMR must be stored in project files and the environmental compliance database.

6. **Water Quality Assurance Plans:** When access to water will be supplied for potential direct or indirect human consumption (both irrigation and drinking water) a Water Quality Assurance Plan (WQAP) will be required and will be documented in the site specific supplemental analyses for the activity.
7. **Climate Change and Project Activities:** For activities which are not CE, activities are required to undergo climate risk screening, using the Climate Risk Screening Matrix (Annex C). The completed Climate Risk Screening Matrix will be shared with the GCC/Climate Risk Management Facilitator, and further shared with the E3 BEO through the AOR.
8. **Agreement Officer (AO) Responsibilities:** USAID procurement should include consideration of the implementing partner’s ability to perform the mandatory environmental compliance requirements as envisioned under the Program/ Project. The Agreement Officer (AO) shall include required environmental compliance and reporting language into each implementation instrument, and ensure that appropriate resources (budget), qualified staff, equipment, and reporting procedures are dedicated to the project.
9. **AOR and Activity Manager Responsibilities:** The AOR and/or on-site activity manager, or their representative of the project will undertake field visits, as possible, and consultations with implementing partners to jointly assess the environmental impacts of ongoing activities, and associated mitigation and monitoring conditions
 - a. The AOR, in consultation with the Mission Activity Managers and implementing partners, Mission Environmental Officers (MEO), Regional Environmental Officers (REO), and/or Bureau Environmental Officers (BEO) as appropriate, will actively monitor and evaluate whether environmental consequences unforeseen under activities covered by this SIEE arise during implementation, and modify or end activities as appropriate. If additional activities not described in this document are added to the primary award, an amended SIEE must be prepared.
 - b. As activity details are made available in the implementing partners’ workplans, the AOR will submit to the respective BEO for review of those activities not specifically identified in the Categorical Exclusion table above. Pursuant to 22 CFR 216.3 (2) the cognizant bureau or office will recommend, to the BEO, a threshold determination on those activities not specifically categorically excluded by this SIEE. The respective BEO will concur or request reconsideration of the recommended threshold decision.
 - c. The AOR/activity manager and BEO/MEO/REA will work to determine the most appropriate environmental analyses required for those activities not categorically excluded.
 - d. The AOR will ensure that no activities are approved for implementation without environmental analysis and a threshold decision. Should there be a positive threshold decision, the AOR will ensure that an environmental analysis is completed and the proposed activity does not begin prior to the conclusion of the procedures set forth in 22 CFR 216.3.
13. **Host Country Laws:** Implementation will in all cases adhere to applicable host country environmental laws and policies.

9. Acronyms

ANC	Ante Natal Care
CBO	Community Based Organization
CLTS	Community-Led Total Sanitation
CBMR	Community-Based Monitoring and Reporting
CMMF	Community Managed Micro Finance
CRS	Cross River State
HCW	Health Care Worker
ITN	Insecticide Treated Nets
EHC	Environmental Health Club

EIA	Environmental Impact Assessment
ODF	Open Defecation Free
PfD	Partners for Development
LAM	Local Area Mechanics
LGA	Local Government Area
MFI	Microfinance Institution
NFI	Non-food Item
RUDA	Rural Development Agency
RUWASSA	Rural Water Supply and Sanitation Agency
RUWASTA	Rural Water Supply and Sanitation Agency
TCF	Tulsi Chanrai Foundation
TfD	Theater for Development
UNICEF	United Nations International Children's Emergency Fund
VHP	Volunteer Hygiene Promoters
VIP	Ventilated Improved Pit Latrines
VLOM	village level operation and maintenance
VSLA	Village Savings and Loan Association
WASH	Water, Sanitation, and Hygiene
WASHCOM	Water, Sanitation, and Hygiene Committees
WDC	Ward Development Committees
WES	Water environment and sanitation units
WSP	Water Supply Plan
WHO	World Health Organization

ANNEXES TO THE SIEE:

Annex A: Environmental Review Form for Program Subprojects/Subgrants

Annex B: ENVIRONMENTAL MONITORING AND MITIGATION PLAN (EMMP)

**Annex C: ENVIRONMENTAL MONITORING AND MITIGATION REPORT (EMMR)
GUIDANCE**

**Annex D: CLIMATE RISK SCREENING MATRIX [not an actual CRM matrix resulting from
specific analysis of Nigeria WADA SIEE]**

**Annex E: WADA Rural WASH Sector Support in Abia and Cross River States
Implementation Plan**

Annex A. Environmental Review Form for Program Subprojects/Subgrants

Environmental Review Form for XXX Program Subprojects/Subgrants

A. Applicant Information

Organization	Parent grant or project
Individual contact and title	Address, phone & email
Proposed activity (brief description)	Grant amount
Location of proposed activity	Start and end date of activity

B. Activities, Screening Results, and Recommended Determination

Proposed Activities (continue on additional page if necessary)	Screening Result			Recommended Determinations (Complete for all moderate and high-risk activities)		
	Very Low Risk	High-Risk*	Moderate or Unknown Risk*	No Significant Impact	With Specified Mitigation, No Significant	Significant Adverse
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

*These screening results require completion of an Environmental Review Report

C. Summary of Recommended Determinations (check ALL that apply)

The proposal contains. . .	<i>(equivalent Regulation 216 terminology)</i>
<input type="checkbox"/> After environmental review, activities determined to have no significant impacts	<i>categorical exclusion(s)</i>
<input type="checkbox"/> After environmental review, activities determined to have no significant adverse impacts, given specified mitigation and monitoring*	<i>negative determination(s) with conditions*</i>

<input type="checkbox"/>	After environmental review, activities determined to have significant adverse impacts*	<i>positive determination(s)*</i>
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*for these determinations, the form is not complete unless accompanied by an Environmental Review Report

D. Certification

I, the undersigned, certify that the information on this form is correct and complete and that the following actions have been/will be taken to ensure that the activity complies with USAID’s environmental compliance measures.

-
- Those responsible for implementing this activity have received training in environmental review AND documentation with regard to best practices for activities of this nature. These best practices will be followed during implementation of this activity.

Any specific mitigation or monitoring measures described in the Environmental Review Report will be implemented in their entirety.

Compliance with these conditions will be regularly confirmed and documented by on-site inspections during the activity and upon its completion.

(Signature) _____ (Date) _____

(Print name) _____

BELOW THIS LINE FOR USAID USE ONLY

Clearance Record**

USAID Project Officer <input type="checkbox"/> Clearance given <input type="checkbox"/> Clearance denied	(print name)	(signature)	(date)
USAID MEO <input type="checkbox"/> Clearance given <input type="checkbox"/> Clearance denied	(print name)	(signature)	(date)
USAID REO* <input type="checkbox"/> Clearance given <input type="checkbox"/> Clearance denied	(print name)	(signature)	(date)
USAID BEO* <input type="checkbox"/> Clearance given <input type="checkbox"/> Clearance denied	(print name)	(signature)	(date)

**REO and BEO approval required for all “high risk” screening results and for determinations of “significant adverse impacts.”*

***Note: if clearance is denied, comments must be provided to applicant (use space below and attach additional sheets if necessary).*

E. Draft an Environmental Review Report (if required)

The Environmental Review Report will have the following outline:

1. Summary of Proposal
2. Description of Activities
3. Environmental Situation and Host Country Environmental Requirements
4. Evaluation of Activities and Issues with Respect to Environmental Impact Potential
5. Environmental Mitigation and Monitoring Plan

Phase of project activity	Potential impacts	Mitigation measures	Indicators	Monitoring tools	Person responsible	Illustrative budget

6. Other Information: Where possible, and as appropriate, include photos of the site and surroundings, maps, and lists of any reference materials or individuals consulted.

Annex B: Environmental Monitoring and Mitigation Plan (EMMP)

Description of Activity	Potential Environmental Impacts	Impact Mitigation Measures	Responsibility for Monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
<p>Water Supply</p> <ul style="list-style-type: none"> ▪ Construction or rehabilitation of water facilities (boreholes – hand pumps) 	<ul style="list-style-type: none"> ▪ Improper siting of facilities that damages or destroys natural ecosystems ▪ Creation of stagnant (standing) water near water points that could create breeding opportunities for water-borne disease vectors (e.g. mosquitoes) ▪ Natural or human-caused biological or chemical contamination of water sources causing increased human health risks, including - High arsenic or other mineral/chemical levels, poor management of water points and/or poor design of pipes leading to leakage 	<ul style="list-style-type: none"> ▪ Contractors will apply best practices in construction of buildings and structures ▪ Appropriate erosion control measures will be put in place ▪ Project will minimize damaging of vegetation and will revegetate areas damaged during construction ▪ Appropriate community-based operations and maintenance (O&M) plan will be in place 	<ul style="list-style-type: none"> ▪ WASH Specialist and Program Manager ▪ Community WASHCOMs 	<ul style="list-style-type: none"> ▪ Quality of construction materials as stipulated in Bill of Quantities ▪ Design of facility to address drainage and erosion issues ▪ No. of constitution of community-based O&M members, availability of O&M plan ▪ Monitor and repair leakages, broken pipes, faulty valves, etc. 	<ul style="list-style-type: none"> ▪ Field visits, reports from monitors (WASHCOMs, LGA, RUWASSA) 	<ul style="list-style-type: none"> ▪ Before and after construction and quarterly thereafter
<p>Sanitation</p> <ul style="list-style-type: none"> ▪ Construction or renovation of sanitation facilities 	<ul style="list-style-type: none"> ▪ Contamination of ground water 	<ul style="list-style-type: none"> ▪ The latrines must be constructed minimum 10 meters away from 	<ul style="list-style-type: none"> ▪ WASH Specialist and Program 	<ul style="list-style-type: none"> ▪ Distance of toilet from Drinking water sources 	<ul style="list-style-type: none"> ▪ Reports., Field Visits 	<ul style="list-style-type: none"> ▪ Before and after construction

Description of Activity	Potential Environmental Impacts	Impact Mitigation Measures	Responsibility for Monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
<p>(latrines or other)</p> <ul style="list-style-type: none"> ▪ Construction or renovation of hand washing basins ▪ Construction or renovation of wastewater drainage or conveyance networks 	<ul style="list-style-type: none"> ▪ Waste water ▪ Waste water being diverted through drains 	<p>drinking water sources.</p> <ul style="list-style-type: none"> ▪ Proper disposal of waste water through soak pits or drainage 	<p>Manager</p> <ul style="list-style-type: none"> ▪ Community WASHCOMs 	<ul style="list-style-type: none"> ▪ No. of soak pits constructed 		<p>n and quarterly thereafter</p>
<p>Small-Scale Construction and Rehabilitation Activities</p> <ul style="list-style-type: none"> ▪ Construct or rehabilitate water storage facilities including cisterns, water tanks, reservoirs, etc. 	<ul style="list-style-type: none"> ▪ Bacteriological Contamination of stored water due to poor operations and maintenance 	<ul style="list-style-type: none"> ▪ Regular cleaning of water tanks, regular chlorination of drinking water, repairing of water tanks if damaged, tank should always be covered – ▪ WASHCOMs will be trained on how to manage all of these and what to do if there is an issue 	<ul style="list-style-type: none"> ▪ Community WASHCOMs 	<ul style="list-style-type: none"> ▪ No. of times the tanks are cleaned during the year ▪ No of times the water is chlorinated 	<ul style="list-style-type: none"> ▪ Reports from WASHCOMS ▪ Field visits 	<ul style="list-style-type: none"> ▪ Quarterly

Annex C: Environmental Mitigation and Monitoring Report (EMMR) Guidance

The Environmental Mitigation and Monitoring Report (EMMR) is a document that outlines the status of the initial environmental examination (IEE) and the status of fulfilling the IEE conditions. It indicates whether:

- Steps need to be taken to amend previous environmental documentation;
- Environmental conditions are being met, particularly if mitigation measures are implemented and monitoring undertaken by the Implementing Partner.

A. Status of the IEE

Use the answers to the following questions to determine if the status of the IEE has changed.

- **Modified or New Activities**
Have new activities been added or substantially modified? Has substantial new funding or time been added to the program? Note the nature of these new activities or extension and reference an updated IEE.
- **Resolution of Deferrals**
Did the previous IEE have deferrals? List these and state if they are being resolved through an updated IEE. If not, indicate when an updated IEE will be submitted in order to be able to proceed with the activities.

- **Updates to the IEE**

Based on the above, is an updated IEE needed?

Yes (If yes, attach here.) No

B. Status of Fulfilling IEE Conditions

Implementing Partners reports on:

- What mitigation measures have been put in place? How is the successfulness of mitigation measures being determined?
- What action is being taken based on the results of the monitoring?

Implementing partners should take this opportunity to assess the approved environmental mitigation plan to ensure the commitments made in the IEE are doable and realistic, i.e, not beyond the capabilities and resources of the Implementing Partner to implement. In case of

issues, the Implementing Partner should specify the corrective actions taken to address the deficiency.

Environmental Mitigation and Monitoring Report Facesheet

Title of the program:
Implementing Partner:
Country or Region:
Award Number:
Program Area:
Program Elements and Sub-Elements:
Life of Activity:
Fiscal Year of Submission:

Funding Begin: (MM/DD/YY)	LOA Amount: \$
Funding End: (MM/DD/YY)	FY Amount: \$
ESR Prepared by: (Name/Title/Contact)	Date: (MM/DD/YY)
Date of Previous EMMR: (MM/DD/YY)	Date of Most Recent IEE: (MM/DD/YY)

- A. Status of the IEE**
- No revisions or modifications of the IEE are needed.
 - An amended IEE is submitted.
- B. Status of Fulfilling Conditions in the IEE, including Mitigation and Monitoring**
- All mitigation measures were successful at preventing environmental impact as specified in the original IEE. An Environmental Mitigation and Monitoring Report (EMMR) describing compliance measures taken is attached.
 - Improved mitigation measures were adopted to better reduce environmental impacts. An EMMR describing these improved compliance measures taken is attached.

Approval of the EMMR (as appropriate)

AOR/COR _____ Date: _____

MEO _____ Date: _____

REA _____ Date: _____

BEO _____ Date: _____

Environmental Mitigation and Monitoring Report Form

C. Status of Fulfilling IEE Conditions

Environmental Mitigation and Monitoring Report – table for activities under categorical Exclusion

Classes of actions as per 22 CFR 216.2(c) (2)	Actions implemented	Remarks
(i) Education, technical assistance, or training programs	List of achievements that fit to this class	Any pertinent green activities? See green meeting checklist.
(iii) Analyses, studies, academic or research workshops and meetings		

Environmental Mitigation and Monitoring Report – table for activities under Negative Determination with Conditions

Planned activities	Recommended mitigation actions	Status of mitigative measures/Actions taken	Any outstanding issues relating to required conditions	Remarks
Refer to the EMMP	Refer to the EMMP	Mitigative measures that were put in place	If mitigative measures were not successful or not implemented, why?	Any follow-up actions/recommendations to meet these environmental requirements?

ANNEX D: CLIMATE RISK SCREENING MATRIX²

Defined/ Illustrative Activities List purpose/sub- purpose (IRs/sub-IRs) or activities	Environmental impact	Mitigation Measures	Responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
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² This is a copy/paste of the EMMP, and doesn't actually screen for climate risk. A future IEE amendment may address this.

<p>Water Supply</p> <ul style="list-style-type: none"> Construction or rehabilitation of water facilities (boreholes – hand pumps) 	<p>Improper siting of facilities that damages or destroys natural ecosystems</p> <p>Creation of stagnant (standing) water near water points that could create breeding opportunities for water-borne disease vectors (e.g. mosquitoes)</p> <p>Natural or human-caused biological or chemical contamination of water sources causing increased human health risks, including - High arsenic or other mineral/chemical levels, poor management of water points and/or poor design of pipes leading to leakage</p>	<p>Contractors will apply best practices in construction of buildings and structures</p> <p>Appropriate erosion control measures will be put in place</p> <p>Project will minimize damaging of vegetation and will revegetate areas damaged during construction</p> <p>Appropriate community-based operations and maintenance (O&M) plan will be in place</p>	<p>WASH Specialist and Program Manager</p> <p>Community WASHCOMs</p>	<p>Quality of construction materials as stipulated in Bill of Quantities</p> <p>Design of facility to address drainage and erosion issues</p> <p>No. of constitution of community-based O&M members, availability of O&M plan</p> <p>Monitor and repair leakages, broken pipes, faulty valves, etc.</p>	<p>Field visits, reports from monitors (WASHCOMs, LGA, RUWASSA)</p>	<p>Before and after construction and quarterly thereafter</p>
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Supplemental IEE
Rural WASH Sector Support in Abia and Cross River States, Nigeria
Water and Development Alliance II

<p>Sanitation</p> <ul style="list-style-type: none"> • Construction or renovation of sanitation facilities (latrines or other) • Construction or renovation of hand washing basins • Construction or renovation of wastewater drainage or conveyance networks 	<p>Contamination of ground water Waste water</p> <p>Waste water being diverted through drains</p>	<p>The latrines must be constructed minimum 10 meters away from drinking water sources.</p> <p>Proper disposal of waste water through soak pits or drainage</p>	<p>WASH Specialist and Program Manager</p> <p>Community WASHCOMs</p>	<p>Distance of toilet from Drinking water sources</p> <p>No. of soak pits constructed</p>	<p>Reports., Field Visits</p>	<p>Before and after construction and quarterly thereafter</p>
<p>Small-Scale Construction and Rehabilitation Activities</p> <ul style="list-style-type: none"> • Construct or rehabilitate water storage facilities including cisterns, water tanks, reservoirs, etc. 	<p>Bacteriological Contamination of stored water due to poor operations and maintenance</p>	<p>Regular cleaning of water tanks, regular chlorination of drinking water, repairing of water tanks if damaged, tank should always be covered –</p> <p>WASHCOMs will be trained on how to manage all of these and what to do if there is an issue</p>	<p>Community WASHCOMs</p>	<p>No. of times the tanks are cleaned during the year</p> <p>No of times the water is chlorinated</p>	<p>Reports from WASHCOMS</p> <p>Field visits</p>	<p>Quarterly</p>

Annex E: WADA Rural WASH Sector Support in Abia and Cross River States Implementation Plan

Contents

1. PROJECT OVERVIEW	ERROR! BOOKMARK NOT DEFINED.
2. PROJECT DESIGN & IMPLEMENTATION	ERROR! BOOKMARK NOT DEFINED.
3. STAKEHOLDER ENGAGEMENT	ERROR! BOOKMARK NOT DEFINED.
4. PROJECT SUSTAINABILITY	ERROR! BOOKMARK NOT DEFINED.
5. PARTNER OVERVIEW	ERROR! BOOKMARK NOT DEFINED.
6. TIME, SCOPE, AND BUDGET	ERROR! BOOKMARK NOT DEFINED.
7. LINKAGES TO USAID & TCCC'S SUSTAINABILITY INITIATIVES AND OBJECTIVES.....	ERROR! BOOKMARK NOT DEFINED.
8. COMMUNICATIONS (200 WORDS EXCLUDING TABLE RESPONSES)	ERROR! BOOKMARK NOT DEFINED.
9. MONITORING AND EVALUATION.....	ERROR! BOOKMARK NOT DEFINED.
10. ACRONYMS	ERROR! BOOKMARK NOT DEFINED.

1. Project Overview

1.1. Project Summary

Project Name:	Rural WASH Sector Support in Abia and Cross River States
Country: ▪ Geography	PfD will work in the states selected by GETF of Cross State and Abia, Nigeria. Working with LGA leaders we will identify communities in the following LGAs: <ul style="list-style-type: none"> • Cross River - Odukpani and Obubra; • Abia - Ohafia and Isuikwuato
Project Duration: ▪ Start date – End date	October 2016-September 2018 Implementation: 24 months
Project Focus Area: <i>Please select the focus area(s) for the project</i>	<input checked="" type="checkbox"/> Improved water access <input checked="" type="checkbox"/> Improved sanitation access <input type="checkbox"/> Watershed protection <input type="checkbox"/> Productive use of water <ul style="list-style-type: none"> <input type="checkbox"/> Irrigation <input type="checkbox"/> Non-Revenue Water <input type="checkbox"/> Other (Please specify) <input type="checkbox"/> Other (Please specify)
Overall Project Objective: <i>Please clearly state the project's goal and specific objective (no more than 50 words)</i>	<p>PfD will collaborate with the State Governments of Cross River and Abia to improve and expand access to safe, affordable, sustainable and reliable water and sanitation services in rural communities. More specifically through THE WADA PROJECT PfD will:</p> <ul style="list-style-type: none"> - Establish (where not available) and/or strengthen the capacity of the WASHCOMs to drive the implementation of WASH services in their respective communities; as well as EHCs and health care workers (HCW). - Ensure built-in sustainability with thorough training and support of community groups (WASHCOMs, VLOMs, EHC) by PfD in WASH facility maintenance/repairs and management independent of outside assistance. PfD anticipates training an average of 12 members per WASHCOM per community. - Rehabilitate non-functional and construct water, sanitation, and hygiene facilities, including boreholes, latrines, urinals, and hand-washing stations at schools and health care facilities in 20 rural communities each in Cross River and Abia States reaching a total of at least

	<p>80,000 beneficiaries (include overlap).</p> <p>The project will engage RUWASSA and LGA personnel in the two states on hardware provision connecting each LGA to the already existing supply chain which Tulsu has done previously in other states and identifying and fixing any gaps that exist, developing training materials and workshops for sanitation and hygiene education and behavior change activities in schools and clinics.</p>
<p>Key Project Partners:</p> <ul style="list-style-type: none"> ▪ Primary Implementing Partner (Point of Contact including title, role, email, mailing address and phone) ▪ Other – specify (Point of Contact including title, role, email, mailing address and phone) 	<p>Primary Implementing Partner:</p> <ul style="list-style-type: none"> i. Ediri Iruaga, Nigeria Country Program Director, eiruga.pfd@gmail.com, 13B Angola Street, Wuse Zone 2 Abuja, Nigeria, Mobile: 234 803 344 0120 ii. Katie Baczewski, Program Officer, KBaczewski@pfd.org, +1.301.608.0426 <p>Primary Sub-Implementing Partner:</p> <ul style="list-style-type: none"> iii. Tulsu Chanrai Foundation- Col. G. R. Prasad, Chief Operating Officer, grprasad@tcfnigeria.org +234 (0) 813 409 7464 <p>Other Stakeholders and Government Partners:</p> <ul style="list-style-type: none"> iv. Cross River State Government – Ita Ikpeme, Director General, Cross River State RUWATSSA, itapeme@yahoo.com 08181804103 v. Abia State Government – Engr. O.O. Uko, Program manager, Abia State RUWATSSA, okowuke@yahoo.com +234 (0) 803 719 6285 vi. Odukpani LGA, Cross River State: Mr. Abang Johnson, WASH Coordinator, Odukpani LGA, abang.johnson@yahoo.com +234 (0) 703 821 9038 vii. Obubra LGA, Cross Rivers: Mr. Eno Pius Ekwe, PMEO and Ag WASH Coordinator Obubra LGA, ezakakeddy@yahoo.com +234 (0) 802 221 7779; +234 (0) 803 440 6322 viii. Ohafia LGA, Abia State: Chief Hon. Samson Anaga, Transition Committee Chairman, Ohafia LGA, Abia State 08037313319 ix. Isuikwuato LGA, Abia State: Navy Captain Osondu, 08033255966; Mrs. Christy Emenike, Deputy Chairperson, Caretaker Committee, Isuikwuato LGA, Abia State, +234 8121215328, +234 8132001806

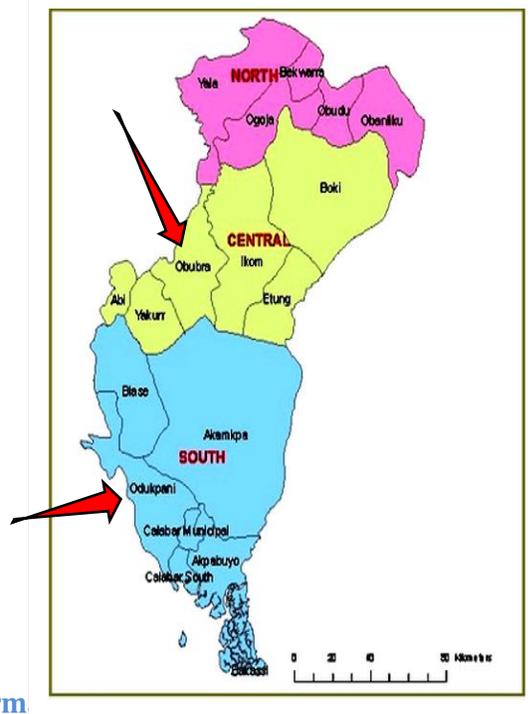
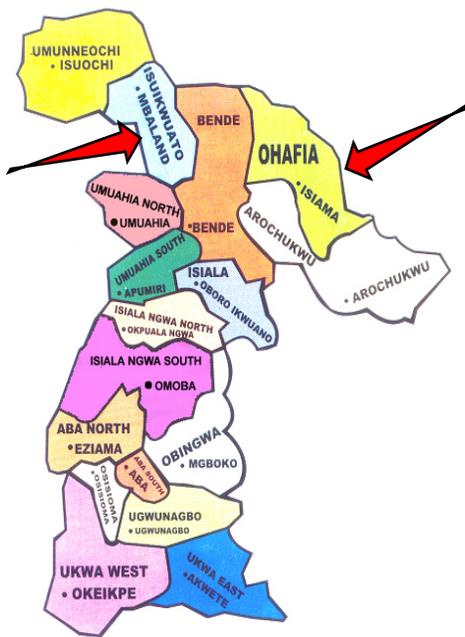
<p>Number of Beneficiaries: Note: These figures can include overlap (e.g. a woman with improved water access who is also economically empowered can be listed twice), but please indicate that overlap and only count each individual once towards the total number.</p>	<p>Total beneficiaries: 80,000 (included overlap) Of these 80,000 beneficiaries:</p> <ul style="list-style-type: none"> • 56,000 improved water access (at the household level) • 440 economically empowered women (included in the 80,000) • 80,000 sanitation access (includes improved household & institutional sanitation access) • 220 economically empowered youth (included in the 80,000) <p>To determine these numbers Pfd used the following averages:</p> <ul style="list-style-type: none"> • 6 people/household • 335 households (avg)/community • 40 total communities reached <p>The total population using the estimates above is 80,000. These numbers will be further defined after the assessment and mapping exercises are complete.</p>
<p>Project Cost</p> <ul style="list-style-type: none"> ▪ Total Cost ▪ WADA Investment 	<p>Total Cost: \$2,049,165 (does not include RUWASA or community support). Upon start-up Pfd will work with the state and communities to better outline and document their commitment and contribution. WADA Investment: \$1,999,893</p>

Map of Nigeria with Cross River and Abia States highlighted in green.



Map of LGAs in Abia State

Map of LGAs in Cross River



1.2. Project Objective and Background Inform

i. What need does this project address?

Access to clean water and improved sanitation facilities is a daily challenge for many Nigerians. This contributes to high prevalence of waterborne diseases, threatens the livelihoods of smallholder farmers, and contributes to low levels of school enrollment, especially among girls (USAID, Nigeria).

“The ability of government to provide basic services such as water and sanitation very directly relates to economic growth, public confidences, and stability efforts,” said Nene Sobande, WASH program manager at USAID/Nigeria. “Strengthening institutions and clarifying sector operations under a transparent regulatory regime provide a solid foundation for good governance, improved service delivery performance, and stable operations,” USAID/Nigeria, Ms. Sobande.

According to the 2014 WHO/UNICEF Joint Monitoring Program for Water Sanitation and Hygiene, it is estimated that only 64 percent of Nigeria’s population has access to improved sources of drinking water, while as few as 28 percent have access to improved sanitation facilities. More than 38 million Nigerians still practice open defecation due to lack of toilet facilities, while hygiene and general health education is at a very low level. Inadequate sanitation facilities and services and poor hygiene practices contribute to a high prevalence of water and sanitation related diseases, such as diarrhea, cholera, typhoid fever and dysentery, which results in high morbidity and mortality rates.

The National Water Sanitation Policy stipulates that each household must have access to a safe sanitary facility of at least an upgraded pit latrine as the minimum service level for sanitation in the rural areas. Access to sanitation in Nigeria has seen a steady drop from year 2000 to 2015, with access to sanitation in rural areas dropping faster than urban. Meeting the demand for sanitation for an increasing population requires the urgent arrest in declining access, while redoubling the push for increased access.

Beyond household sanitation, public places such as schools, markets, motor parks, and community grounds also need sanitation facilities. Public places are natural locations for the easy spread of diseases related to poor sanitation, and open defecation is encouraged where there are no public sanitary facilities. the WADA project will facilitate the activities with all stakeholders for a comprehensive promotion of improved sanitation, and of investment in the development of sanitary facilities in households and public places.

Partners for Development (Pfd) will build on its experience working in the WASH sector in Nigeria to support and expand WASH services in the southern states of Abia and Cross River. Pfd will collaborate with government and private entities including the state Rural Water Supply and Sanitation Agency (RUWASSA)³ and Local Government Areas (LGA) to: (a) increase access to and

³ Throughout this document, Pfd will use RUWASSA for the sake of consistency. However, it is important to note that Abia State uses the acronym RUWASSA while Cross River State used the acronym RUWATSA. The two acronyms stand for the same thing: Rural Water Supply and Sanitation Agency

utilization of improved water sources; (b) improve sanitation⁴; and (c) promote appropriate hygiene education in rural communities, schools and health facilities within the project location. This will necessitate construction and rehabilitation of water supply sources, construction and rehabilitation of improved sanitation facilities; education of safe water storage and treatment as well as promoting appropriate hygiene practices. The project will also strengthen capacity of local institutions and community members by providing them with appropriate training that will enable them to lead in the maintenance and operation of these water and sanitation facilities; and in the management of WASH interventions in their communities, schools and healthcare facilities. The project will diagnose and address capacity gaps within supervisory government institutions and community structures responsible for WASH services - the state RUWASSA and LGA WASH department/unit and WASHCOM Federation - and position them to properly engage their respective governments towards advancement and sustainable delivery of WASH service delivery in the project states. Specifically, the project will support the states to review and/or develop a WASH investment/development framework that will serve as a tool for engaging stakeholders in resource mobilization for scale up or replication of project interventions in other locations within the target states.

Working with the respective state RUWASSA and authorized departments in the selected/target LGAs, this project will construct and/or rehabilitate at least 10 hand pump boreholes and 10 sanitation facilities units in each LGA. The facility sites will be selected based primarily on needs, effectiveness/efficiency, and impact on the population. As much as possible, the project will site facilities in locations that complement existing USAID and Coca Cola investments. Before sites are selected PfD will ensure that the respective LGAs will provide an enabling environment while ensuring reasonable contribution for the construction (including commitment to monitoring and maintenance) of these facilities. The construction and/or rehabilitation of these improved water and sanitation facilities will enable access and utilization by target beneficiaries. According to WHO⁵ improving access to safe water supply and sanitation services:

- Will reduce morbidity and mortality related to water-borne disease.
- Confers other diverse benefits ranging from the easily identifiable and quantifiable (costs avoided, time saved) to the more intangible and difficult to measure (convenience, well-being).
- Results in less illness and fewer days lost with respect to formal or informal employment, other productive activities in the household, or school attendance.
- Provides associated time saving with closer location of the facilities.

Lessons learned from previous WADA, UNICEF, and other projects in addition to WASH best practices, show that community ownership is key. In order to create community ownership, the improved capacity of community members on WASH is essential. To ensure community buy-in, the project will endeavor to engage community members in discussions concerning this project, ensure their participation, engagement, selection and ownership of WASH related activities. In the WADA project, PfD will train community members as WASH facility managers and artisans, and village level operation and maintenance (VLOM) teams to be able to provide regular and timely maintenance as needed. PfD will also establish and/or strengthen water, sanitation, and hygiene

⁴ Throughout the implementation plan sanitation facilities are discussed. It is important to note that handwashing stations will be linked to sanitation/toilet facilities.

⁵ http://www.who.int/water_sanitation_health/wsh0404summary/en/

committees (WASHCOM) in these locations to drive WASH activities in their respective communities with strong linkages to the LGAs and RUWASSA. Since 2014 and with funding from UNICEF, PfD has been supporting local government WASH Units to strengthen capacity of voluntarily constituted institutions within rural communities that drive various community WASH activities. These WASHCOMs have been trained and mentored by PfD and local government staff for their assigned roles. During this process, PfD provides capacity building in documentation, reporting, facilitation skills, etc. to local government personnel. Technical trainings will include safe water storage and treatment, behavioral change around use and maintenance of water and sanitation facilities, household and personal hygiene practices, and maintenance/repair training for the VLOMs and linkages to supply chain for tools/spare parts to carry out this work. The Expanded Guidelines for WASHCOM formation and training manual on community WASH management includes areas such as capacity building on organizational management for WASHCOMs, including bookkeeping, recordkeeping, and group dynamics. The project will train community self-selected members drawn among women, youth, and artisans within the community.

The challenges that exist in Cross River and Abia range from poor water quality, high water table, deep-seated aquifers, low yield, and saline water intrusion, amongst others. These hydrological and geological variations in the country demand careful assessment of the appropriateness of technologies before they are applied. PfD in collaboration with the state governments will ensure that these factors are carefully considered when siting new water facilities. When visiting the sites, PfD also found that the collaboration between the state RUWASSA and LGA, as well as between the LGA and communities, was inadequate. Therefore, PfD will focus on strengthening these connections through a tiered and integrated training plan.

The scope of work for the hydrogeological assessment will be jointly developed by the states and WADA partners. Immediately upon award PfD will release a tender for the hydrogeological survey. PfD has been in contact with various experts to confirm that the timeline and costs are accurate. As a cost savings, PfD will work with the selected vendor to rent the required equipment. Purchasing the equipment would be extremely costly. The tiered and integrated training plan will be developed following the assessments so that it directly responds to the gaps and needs that exist in each state, LGA and community. PfD has recorded successes in utilizing the integrated training approach in its UNICEF-supported project in Delta, Edo and Ekiti states.

ii. What is the baseline situation in the specific target area?

As confirmed during the June 2016 reconnaissance visit, the WADA team found some level of data (though not updated in recent years) in Cross River State and very little information or existing data on WASH in Abia State. The baseline situation for each community varies greatly. In Cross River State the visiting WADA team spoke with communities that have both water and sanitation facilities that are working and adequately serving the communities, and yet at the same time there are communities with non-functioning water facilities and non-existent sanitation facilities. Worse yet, in Abia there are more communities without water or sanitation facilities.

The water source also varied by community. Many communities in both states get their water from stream, private water facility, or through rainwater catchment systems, in addition to those collecting water from donor-provided facilities. In Abia State, fewer communities have access to donor-provided facilities. Because there is inadequate baseline data, PfD will use this as an opportunity to conduct needs assessments in the selected locations to gather accurate information and data. PfD will also create buy-in and train the state RUWASSA, LGA, and communities during the needs assessments. While involving stakeholders, PfD will ask for in-kind contributions such as staff time and office space from all levels of government from the State Governments, through RUWASSA and to the head of community. The goal of the needs assessment is two-fold: 1. to determine the needs and 2. to find ways early-on for state, LGA, and community investment in WASH. More details on the existing baseline situation related to geophysical properties, linkages, technology, water supply, and sanitation can be found below. PfD will consult closely with GETF during the baseline assessment and hydrogeological study activities.

Geophysical Properties

Though Cross River does have a map of various LGAs which outlines some geophysical properties, it has not been updated since 2011. In Abia, the WADA team was not able access the state's geophysical map. The lack of understanding of the states' geophysical properties has resulted in a serious waste of resources by previous donor-supported water projects and PfD would recommend that a proper geophysical study of both states (at least for the selected LGA) be conducted before siting new water facilities. PfD in collaboration with the respective state RUWASSA will research and determine exact cost and timing needed for this. PfD will start survey in Cross River State which has a stronger RUWASSA and has a number of geologists on staff who can support the study. When moving to Abia, the project will assess the level of resources Abia can provide and ask the geologists from Cross River to also support this work, provided that they are paid for transport and lodging. PfD looks forward to discussing these options with GETF, Coca-Cola and USAID and welcomes any ideas on cost-share or resources that may exist. PfD has approached the state government on supporting these activities and will confirm the details and commitment of the state once the project starts.

PfD will carry out a geophysical survey at two levels: the state level to help determine the overall water resources that exist and the geology of the state and at the community level to help determine the site of the borehole. The community level survey will feed into the state-level survey. The state-level survey will provide the project and the state with information needed to ensure that the project will not deplete any water tables, etc. Additionally, it will help ensure that going forward the states are efficiently using their resources. To date, in both states, a number of boreholes have been drilled which are not functional some, in part, due to the lack of understanding of the local geophysical properties.

Geophysical investigations involve simple methods of study made on the surface with the aim of ascertaining subsurface detail. This is achieved by measuring certain physical properties and

interpreting them mainly in terms of subsurface geology. This investigation will be aimed at locating and assessing groundwater potential and quality.

The result of the state-wide geophysical survey will include the following:

Physical Location

- Climate
- Physiography, Topography And Soils
- Regional Geology
- Local Geology

Fieldwork

- Hydrogeological Transects
- Summary Of Electrical Resistivity Theory
- Survey And Results
 - Horizontal Electric Profiling (Hep)
 - Vertical Electrical Sounding (Ves)

Aquifer Potential; Sustainable Yield And Water Quality

- Hydrogeological Setting
- Aquifer Occurrence
- Aquifer Characteristics
 - Yield
 - Specific Capacity
 - Transmissivity
- Recharge And Flux

The community-level geophysical surveys will include:

Effects of Proposed Borehole

- Interference Effects
 - Borehole Density
 - Water Quality

Hydrology

Proposed Drilling Site

Proposed Drilling Method

Poor Linkages

The 2014 Baseline Assessment Report⁶ by UNICEF shows that the WASH-sector is hindered by limited government coordination and cooperation between LGAs, states, and the national governments as well as poor articulation of development plans and resource flow from the national MDAs to their state counterparts and down to the local authorities that interface with the communities. There are other issues of weak capacity and coordination, weak participation and

⁶ Summary Findings of Baseline Survey under FGN/EU/UNICEF NDSP & WSSSRP III. DEC. 2014

ownership, non-existence of clear mechanisms for investment mobilization, and weak public finance management and accountability frameworks that have limited investments by partners in the sector. There is also duplication of project efforts with attendant neglect of vulnerable groups and locations. These issues were evident during the WADA team reconnaissance visit to Cross River and Abia states.

In response to these known issues, during start-up and as a part of the needs assessment PfD will make advocacy and sensitization visits to relevant government and private entities to create buy-in and solicit in-kind contributions to project activities/success. PfD will document best practices, lessons learned, processes, and results, which will facilitate any scale-up efforts.

The project will diagnose and address capacity gaps within supervisory government institutions and community structures responsible for WASH services - the state RUWASSA and LGA WASH department/unit and WASHCOM Federation - and position them to properly engage their respective governments towards advancement and sustainable delivery of WASH service delivery in the project states. Specifically, the project will support the states to review and/or develop a WASH investment/development framework that will serve as a tool for engaging stakeholders in resource mobilization for scale up or replication of project interventions in other locations within the target states.

In order to effectively scale-up and to achieve sustainable results, the involvement of both local and state government is key. Previous WADA reports demonstrate the importance of this issue.

Technology Selection

The baseline for what systems (hand pumps, VIPs, solar pumps, etc.) have been used is somewhat more developed than the other data that exists. However, a full needs assessment is needed to determine what is working/not working, where and why. Some failed water and sanitation projects were due to the use of inappropriate technologies for service delivery, leading to poor performance, lack of access to spare parts, and eventual failure of such systems. Hydrological and geological variations in Abia State (Isuikwuato and Ohafia LGA) and Cross River State (Obubra and Odukpani LGA) in particular require a careful assessment of the appropriateness of technologies before they are applied. Please note that the budget currently only includes the cost of hand pumps. In consultation with UNICEF, TCF, and others PfD found that hand pumps are likely the best option for the areas in which we will be working.

The approach to application of technology is also of utmost importance, as a particular technology may be appropriate for a location, but an inappropriate approach in the deployment of that technology will lead to project failure. PfD/WADA project in collaboration with the various State RUWASSA will develop a clearly defined approach, which will include the assessment of the appropriateness of a technology, vis-à-vis a specific location, before use.

This project will initiate the “ladder approach” to provision of drinking water starting with the attainment of “basic water supply” – that includes access to safe water within 30 minutes round-trip (including queuing time), and then gradually reaching every household with “water on premises”.

Water Supply

Most of the water supply facilities (where boreholes exist) for domestic use in Abia and Cross River States are from groundwater sources. In the rural areas, small-scale

Figure- 1: Drinking



agricultural activities also depend on groundwater sources for irrigation and processing. Other sources for rural water supply are the surface water (in streams, rivers, lakes, ponds and spring), and rain water harvesting.

The hand dug wells, hand pump boreholes, and motorized boreholes are the three widely used technologies for abstracting ground water in rural communities of Abia and Cross River State, with the hand pumps being the most common.

The Federal Ministry of Water Resources, based on a survey completed in 2015, confirmed that over 58% of completed water facilities in the country are nonfunctional, with hand pumps and motorized boreholes accounting for a significant number of these facilities.

The feasibility of the technology options that will be deployed under PfD/WADA project will be examined with due consideration to the hydrogeological context, socio-cultural practices, cost effectiveness, availability of spare parts, environmental-friendliness and sustainability. Life cycle costing (covering capital, long-term operational and maintenance/ repair costs) for each of the technology options for facility rehabilitation or construction will guide communities to make informed choices. The likely options will range from:

- Hand pump boreholes – for shallow aquifers and in areas with sparse population
- Motorized boreholes – for deep seated aquifers and in areas with dense population (if the community is willing to raise the additional funds)
- The project will provide linkages to water treatment systems in areas with poor water quality where feasible. PfD with the support of TCF will assess the needs and resources in each state and determine which labs will be used. It is likely that field test kits will be used for the majority of testing and additional tests will be run at the nearest state-approved labs. During baseline, PfD will conduct further due diligence on available laboratories to ensure the required standards are met. PfD will liaise with GETF throughout this process.
- Environmentally friendly and clean energy sources (like solar and wind) will be preferred for motorized schemes (if the community is willing to raise the additional funds). PfD will clearly outline the costs, benefits and challenges with each mechanism. By sharing this information, it is assumed that the majority of communities will be satisfied with hand pumps, but the choice (and additional expenses) will be left up to the communities.

Some available documentation to facilitate selection of appropriate technologies include: Technology Assessment Framework – Water Aid (<http://www.washtechnologies.net/>) and UNICEF supported – WASH Feasibility Studies for Technology Options in Nigeria, which also considered Life Cycle Costing for the proffered options.

Sanitation Approaches

Onsite sanitation facilities are the most feasible options for excreta waste management in Abia and Cross River like most states in Nigeria with little or no sewage systems in operation in rural communities. The popular onsite sanitation systems include the flush systems (pour flush, water

closet) and pit latrines. Open defecation and the use of pit toilets are the prevalent sanitation practice in most rural areas in Abia and parts of Cross River State.

Hydrogeological, environmental, and social-cultural practices among communities impact the construction and operation of sanitation facilities in Abia and Cross River State and Nigeria. Finding appropriate, adaptive, and acceptable options to suit these particulars remains key in scaling up sanitation and achieving an open defecation free status in Abia and Cross River State. In line with the National Roadmap for Eliminating Open Defecation in Nigeria, Community-Led Total Sanitation will be one of the key approaches in scaling up sanitation in the selected LGAs.

The southeast, where Abia State is located, has a coastal plain while the Niger delta that is located in the southern part of Nigeria is one of the world’s largest fan-shaped river-delta. The riverine area of the Niger delta, where Cross River State is located, is a coastal belt of swamps bordering the Atlantic Ocean. With such diversity in the geophysical conditions, it is essential to develop and promote suitable latrine designs that will not only be cost-effective, environment-friendly, and easy to construct but will also be acceptable to people. In areas with high ground water, the conventional pit latrine is going to contaminate ground water used for drinking and hence will not be promoted and advisable. Similarly, in flood-affected areas, latrines with raised platform will probably be more suitable. For areas with loose and collapsible soils, a protected wall with cement rings or even drums will be promoted as an alternative with provision for adequate seepage.



The WADA Project will contribute to the 2025 Road Map of an ODF Nigeria, then gradually raise the bar towards improved sanitation and finally aim at “safely managed services for all”. The WADA Project will support training and resource mobilization of household latrines, but it will not be responsible for constricting them. Communities will come together to construct latrines in locations such as schools, health clinics or village centers and through this construction the WADA Project will conduct demonstrations on how to build a household latrine and provide linkages to the supplies.

Should the cost be prohibitively expensive, likely due to hydro-geological conditions, the WADA Project will engage the states and LGAs to consider a subsidy approach.

The design and cost of a household latrine will vary significantly in areas with a high water table, area frequented with flood, rocky areas, hilly areas and areas with loose soil formation. PfD will review the current UNICEF designs that already exist in Cross River to determine the most appropriate design for each community. In developing and promoting appropriate designs of latrines (for sub-structure as well as super structure), affordability of the large majority of poor

people will be taken into account besides the special needs of those physically challenged. Designs and technology options⁷ for WASH facilities in public places (markets, motor parks, parks) will be adopted.

More details on each state:

Abia State has a population of 2,833,999 in 17 Local Government Areas (LGA). The state RUWASA's mandate is to coordinate and manage rural water supply and sanitation activities and projects in the LGAs; however, the LGAs do not have established water environment and sanitation (WES) units or WASHCOMs. The state RUWASSA is not adequately staffed or funded. It is still embedded within the Ministry of Agriculture. Zero donor-related WASH-activities are currently taking place in the state; the exception being the World Bank, which in recent past provided water facilities in some communities. Some years ago UNICEF provided water facilities - primarily hand pumps in several communities. In 2013, the UNICEF Enugu regional office funded the "triggering"⁸ of rural communities in six⁹ LGAs for Community-Led Total Sanitation (CLTS) and yet none of these communities has attained ODF status due to the lack of follow-up and mentoring. The UNICEF project at that time focused on triggering and not long-term sustainability as the UNICEF project did not have a heavy focus on software and community buy-in. While there were some benefits and positive outcomes of the UNICEF project long-term sustainability was not one of them. PfD has and will continue to learn from past projects so that the same mistakes are not made twice.

The state urban water plan provides water for the towns of Aba and Umuahia. For rural areas, there is a rural water scheme¹⁰. However, most rural dwellers rely on streams and wells for their domestic water needs. Communities living in the coastal plain sand areas experience acute water shortage between November and March when wells and water ponds ebb significantly. In the area of water supply, the state is engaged in the constant maintenance of existing water works while also opening up new regional water schemes in various communities. The state does not have a water and/or sanitation policy or framework in place. Open defecation is almost exclusively practiced in all the communities in the selected LGAs of Isuikwato and Ohafia.

Cross River State (CRS) has a population of 2.89 million in 18 LGAs. According to the *Cross River Road Map to ODF status (2013)*, estimated statistics showed there were 1,841 public places without toilets. The CRS Ministry of Water Resources oversees water related functions with the overall mandate to coordinate and manage water resources in the State. The Ministry's main focus is the facilitation of access to adequate and affordable clean water supply to all the citizens of CRS with a sustainable approach, and community mobilization for greater sustainability. RUWATSA¹¹ also constructs VIP and low cost SanPlat latrines and carries out health education and promotion. Rural Development Agency (RUDA) intervenes in the areas of rural water, health, education and roads and provides water infrastructure in rural areas but has limited activity in facilitating the activities of LGAs and communities. Currently, there is an administrative arrangement whereby RUWATSA

⁷ Design Guidelines for WASH Facilities in Schools and Health Centers exist.

⁸ Terminology used by UNICEF for the introduction of communities to the concept of CLTS

⁹ Osisioma, Ohafia, Bende, Isuikwato, Isialangia South and Ikwuano LGAs

¹⁰ A Rural Water Scheme is a local government level water treatment and distribution facility designed to provide quality water supply to rural/semi-urban communities within the LGA.

¹¹ Throughout this document, PfD will use RUWASSA for the sake of consistency. However, it is important to note that Abia State uses the acronym RUWASSA while Cross River State used the acronym RUWATSA. The two acronyms stand for the same thing: Rural Water Supply and Sanitation Agency

reports through RUDA to the Executive Governor. LGAs through the WASH unit/department also have responsibility for the provision of potable water to rural communities in their area of jurisdiction. They also carry out the function of establishing and maintaining public conveniences and refuse disposal.

Software sanitation activities of CRS RUWATSSA for the year 2015 – 2016 have been in collaboration with EU/UNICEF and Concern Universal through the Rural Sanitation and Hygiene Promotion in Nigeria (RUSHPIN) and Community Led Health Improvement through Sanitation and Hygiene Promotion in Nigeria (CHISHPIN) Programmes. The strategy utilized is the Community Led Total Sanitation (CLTS) is an innovative methodology for mobilizing communities to completely eliminate Open Defecation (OD). Communities are facilitated to conduct their own appraisal and analysis of open defecation (OD) and take their own action to become ODF (Open Defecation Free). This project will ensure that sustainability elements are in place – follow up, supervision and mentoring – unlike in 2013 when the follow up/supervision was inadequate.

Each of the 18 LGAs in the state has a Water Supply and Environmental Sanitation (WES) department that is involved in the formation and management of WASHCOMs and plays a key role in community mobilization and sensitization and establishment of project management structures. The LGA WASH departments equally play a key role in facilitation of community-led project implementation processes and activities, monitoring and evaluation, and reporting. However, most of the LGA and community WASH structures are not effective, resulting in poor ownership and sustainability, non-functional water facilities, poor water supply, and sanitation practices including open defecation in some communities of Obubra and Odukpani LGAs. The current WADA plan improves on the previously unsuccessful approaches to ODF and inter-agency communication by focusing heavily on community ownership, software (training and linkages) and looking at the entire eco-system, not just one community. There is nothing novel about the approach, Pfd will simply put in place a mechanism for follow up, supervision and mentoring of the WASHCOMs by the LGA and RUWASSA staff members, even after end of project.

iii. Why were the specific sites chosen?

The states were jointly selected by USAID and Coca-Cola in partnership with GETF. Pfd selected the LGAs in partnership with the State Government RUWASSA after reviewing existing information on their WASH status. The four LGAs were selected based on identified WASH needs and gaps that existed in the state, past WASH interventions by state governments and other donors, institutional capacity of LGA, willingness for partnership, possibility for replication and scaling up and sustainability of interventions by the LGA, enabling environment - security, etc. The communities will be chosen based on the need and enabling environment. The needs assessment will look at a number of qualitative and quantitative factors including:

- Access (security, distance, roads)
- Existing structures to support WASH
- Community WASHCOM formed
- Demonstrated buy-in and support from community
- Demonstrated buy-in and support from leadership
- Geophysical properties
- Proximity to one another
- USAID health clinics
- Leveraging other USAID programs

- # of water points that exist
- # of community members served
- # of households
- Balance of rehabilitation vs. new construction
- Adding sanitation facilities to communities that have water and vice versa
- Working clean water in schools
- Sanitation facility in schools
- Working clean water in health center
- Sanitation facility in health center
- Working clean water in community center, market or other shared location
- Sanitation facility in community center, market or other shared location

It is important to note that there is no standard score that each community needs to meet, instead the goal will be to find the right mix of communities where PfD believes it can do the “most good” and create lasting, sustainable results.

Following the needs assessment PfD will work with RUWASSA and LGAs to select communities. The selected list of communities along with the rationale for selection will be presented to GETF, USAID and Coca-Cola for approval. The rationale for selection of communities will be developed during a wider stakeholder consultation that will be held at project start up in each state. This will also enable buy-in from the various states and LGA from the onset of project implementation.

2. Project Design & Implementation

2.1. Implementation Plan Log

Objectives	Technical Approach and Justification	Assumptions/Risks
<p>Conduct baseline (as well as hydrogeological) survey of rural communities in project LGAs in Abia and Cross River states to select communities for interventions</p>	<p>To establish need and benefit of intervention to selected communities; feasibility for location of interventions and facilities; ascertain commitment and potential for sustainability; etc. This will be done via stakeholder engagements/small group discussions, site visits, etc.</p>	<p>There is availability of technical expertise and technology/equipment for hydrogeological survey in the states; the state governments are committed to contributing to this effort.</p>
<p>Rehabilitate non-functional and construct water, sanitation, and hygiene facilities, including boreholes, latrines, urinals, and hand-washing stations at schools and health care facilities in 20 rural communities each in Cross River and Abia States reaching a total of at least 150,000 beneficiaries.</p>	<p>Establish status and appropriate technological options of water supply facilities, latrines, urinal compartments and handwashing stations in schools, health facilities and other community public places for upgrade provision.</p>	<p>The WASH needs in schools, health facilities and communities may overwhelm the available resources. There may be some security challenges; no information on the status of some communities and difficult to reach communities.</p>
<p>Provide appropriate hygiene education and training</p>	<p>As needed, the project will adapt/adopt existing or develop appropriate training modules, interventions and result monitoring frameworks for hygiene improvement. The project will strengthen capacity of volunteer hygiene promoters (where they exist),</p>	<p>Implementing agencies/actors may lack knowledge on the national guidelines for the implementation of hygiene improvement interventions.</p>

	WASHCOMs, School Environmental Health Clubs (SEHC) to provide hygiene education in the communities.	
Establish (where not available) and/or strengthen the capacity of the WASHCOMs to drive the implementation of WASH services in their respective communities; as well as EHCs and health care workers (HCW).	Establish status of community WASHCOM and strengthening their capacity on bookkeeping, record keeping and documentation, group dynamics, advocacy, etc. to take on their assigned role of leading WASH service delivery in their communities. There are various models for collection of funds which PfD will share with the communities. It will be up to the communities to select the method that works best for them and PfD will support the WASHCOM to establish and carry -out the selected method.	Community members may not be willing and available for community WASHCOM.
Ensure in-built sustainability through training and supporting community groups (WASHCOMs, VLOMs, EHC) by PfD in WASH facility maintenance/repairs and management independent of outside assistance. PfD anticipates training an average of 12 members per WASHCOM per community.	PfD will build the capacity of communities to own the facilities sited within. WASHCOMs and EHC (in schools) will lead on advocacy and education on behavioral change around water, sanitation and hygiene. While the VLOM will be trained artisans within the communities that operate and maintain the facilities, the project will also link VLOMs to supply chain to provide spare parts for repairs and maintenance of facilities. TCF is connected with the supply chain that exists and will ensure that one vendor in each LGA is connected to said supply chain. PfD will work with the State RUWASSA and LGAs to ensure continuous monitoring, mentoring and supervision of WASHCOMs even after life of project.	The communities will establish their preferred sources of resource mobilization. There is the risk of trained community members leaving the communities to seek greener pastures. It is assumed that the State governments will continue to support the RUWASSA and LGAs

Project Timeline

Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Agreement Signed																								
Office Set-up and staff hired																								
Stakeholders meeting - one in each LGA																								
RUWASSA needs assessment																								
LGA needs assessment																								
State-wide geophysical surveys (ideally State will support the supervision and related activities).																								
Communities selected																								
Community engagement agreements																								
Participatory Assessment and Community Mapping																								
WASHCOM - TOT in each state																								
Geophysical survey in selected communities																								
WASHCOM training in each LGA (led by RUWASSA)																								
WASHCOM training in each community (led by LGA)																								
CLTS training and																								

2.2. Project Scalability

THE WADA PROJECT will engage all stakeholders from start up to create buy-in and opportunities for contribution to implementation. There will be continuous engagement of government at the state and LGA levels to set aside budget, not only for maintenance, but also for scale-up and replication of projects in other locations. PfD has specifically planned out low-cost, low-maintenance solutions so that each LGA can appropriate and adequately cover the costs going forward. PfD will also create linkages and collaboration with other private and non-governmental entities (NGO and other development partners) to expand and replicate project objectives as appropriate. At this stage, the donor has not requested plans for scale-up and therefore scale-up and replication are not direct activities under this project. However, THE WADA PROJECT in Nigeria will be guided by the following principles that will pave the way for scalability and sustainability:

1. Develop service delivery models that can be replicated at scale, increasing the commitment and improving capacity of the States/Government partners to invest more in providing sustainable water and sanitation service delivery.
2. Implement best practices in the area of citizens' voice and accountability through WASHCOM federation as a key driver to improving the commitment and responsiveness of government partners to increasingly invest in the provision of WASH services.
3. Select low-cost, sustainable models on water supply and sanitation and develop low cost toilet options which can be constructed by using locally available materials and artisans.
4. Train village level artisans on construction of low cost toilets. The community members can also get their toilets constructed by the trained artisans and locally available materials.
5. The project will train local area mechanics at the LGA level and pump caretakers at the village level for smooth operation and maintenance of water facilities.

2.3. Water Quality Testing

The water quality testing plan will be adjusted as necessary following the SIEE review and approval..

Water Quality Testing Plan

Drinking water system (include name of community and type of scheme)	When will testing will be completed?	What contaminants will be tested for and what method will be used?
Hand Pump Boreholes. Name of the communities will be finalized after need assessment.	Source water will be tested at the outset of the project and prior to construction. Taps will be sampled after installation/rehabilitation and before community	Contaminations to be tested: Taste, Odor, Color, Turbidity, pH, Conductivity, Iron, Nitrate, Aluminum, Arsenic, Fluoride, Fecal Coliform and Total Coliform. Methodology: A combination of water quality testing will be used.

	<p>consumption and at an appropriate frequency agreed upon by project stakeholders and as determined by outcome of initial test results</p>	<p>During the assessment PfD will work with the state to determine what their skills and resources area and then outline a methodology for testing that is in line with national standards. It is important that the state RUWASSA be a part of this process so that they can outline a solution that will be carried out after the project ends. PfD will review all options including but not limited to Field Testing Kits and Laboratory testing. It is likely that the test will include: H2S vail testing will be done to check the presence or absence of coliform. Microbiological tests will be the main concern since it is responsible for majority of illnesses and deaths related to drinking unsafe water. Government recognized labs and field testing kits will be used. The samples will be collected in sterilized bottles and transported to the nearest laboratory within 24-36 hours. The field team members will be trained on how to collect samples for water quality testing to assure that the samples are not contaminated by bacteria in the bottle. Costs for water quality testing will be determined after due consultation with the RUWASSA.</p>
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In addition, please also include a Water Quality Assurance Plan (WQAP) with [Attachment 1: Environmental Monitoring and Mitigation Plan.](#)

2.4. 2.4. Gender Equity

Abia and Cross River states communities are marked by huge geographical and gender disparities. Although both male and female, young and the elderly have the right to be informed and to have access to safe, effective, affordable WASH services as well as being part of WASH management, women and girls are not given fair and just opportunities. As part of the implementation strategy,

PfD will make deliberate efforts to involve all strata of the population in the discussions during the needs assessments and their contributions will be considered in the implementation of services. Facilities constructed or rehabilitated will accommodate all gender (male and female, elderly and young) needs. For example, the sanitation facilities constructed by this project shall have separate compartments for male and female and can be accessible by young, elderly and/or physically challenged.

Additionally, the project will reduce gender disparity by involving male and female both as artisans/mechanics that will be trained for construction of toilets and VLOM for water facilities. Priority will be given to active women as caretakers at water collection points where they can also establish their small kiosk for petty businesses. During formation of WASHCOMs at the community level, conscious effort will be made to have balanced numbers of male and female members so that both sexes can be involved in management of WASH services in the communities.

3. Stakeholder engagement

[PfD recognizes the strengths of various stakeholders in this partnership and will build on the comparative advantage of each stakeholder for the sustainability of this project. THE WADA PROJECT will collaborate and create linkages with relevant stakeholders in the WASH sector during project development and implementation as well as harness their strengths in assigning roles and responsibilities for project sustainability accordingly. Indicative roles and responsibilities of selected stakeholders with respect to this project are outlined in the table below.

Table 1 : Basic roles and responsibilities of selected stakeholders and the WASH Eco-system in which PfD will operate

Stakeholder	Engagement: Basic Roles and Responsibilities
Community WASH consumers and users	<ul style="list-style-type: none"> ▪ Participate actively in decision-making, planning, implementing, operating, and maintaining new and rehabilitated WASH facilities ▪ Own and control water supply and sanitation facilities ▪ Form Water User Groups/ WASH Committees (WASHCOMs) ▪ Ensure continued safe access, quality and use of installed facilities ▪ Partially contribute to construction costs and fully cover O&M costs of WASH facilities ▪ Have full responsibility for operation and maintenance of water and sanitation facilities. ▪ Carry out monitoring of WASH facilities ▪ Collect data and submit reports to community structures/ authorities for on-forwarding to LGAs and States ▪ Carry out training for communities
LGAs	<ul style="list-style-type: none"> ▪ <i>Create an enabling environment for WASH implementation in the LGA</i> ▪ Prioritise rural communities for WASH improvements ▪ <i>Coordinate and supervise WASH work being done in the LGAs</i> ▪ Monitor and report progress ▪ Carry out training, mentoring, monitoring and support for community WASHCOMs ▪ Support communities to plan and budget for community-based WASH projects and facilitate communities to request assistance ▪ Community mobilization and training for hygiene and sanitation improvements and community management of water supply and sanitation

Stakeholder	Engagement: Basic Roles and Responsibilities
	<p>facilities</p> <ul style="list-style-type: none"> ▪ Partially contribute to water supply and sanitation development especially for poor communities and for repairs of water facilities beyond the financial capacity of users
States/RUWA SSA	<ul style="list-style-type: none"> ▪ <i>Create an enabling environment for WASH implementation in the State</i> ▪ <i>Prioritise rural communities WASH improvements</i> ▪ <i>Co-ordinate and supervise WASH work being done in the State</i> ▪ <i>Monitor and report progress</i> ▪ <i>Support LGAs to plan and budget for community-based WASH projects</i> ▪ <i>Support LGAs to provide technical support to growth centres and communities, and monitor, report and account for use of funds</i> ▪ <i>Organise required training for Local Councils, as well as Water User Groups if required</i> ▪ <i>Partially finance water supply and sanitation development especially for development to sustain present coverage and support poor LGAs</i>
Federal Government	<ul style="list-style-type: none"> ▪ <i>Co-ordinate the National Rural WASH and resource inputs of external and in-country support agencies and other key stakeholders</i> ▪ <i>Create a positive enabling environment</i> ▪ <i>Support States to plan and budget for community-based WASH projects</i> ▪ <i>Support States to provide technical support to States, growth centres and communities, and monitor, report and account for use of funds</i> ▪ <i>Organise required training for Local Government, as well as Water User Groups if required</i> ▪ <i>Promote and organise private sector involvement in sub-sector activities</i> ▪ <i>Research and development of new technologies and approaches</i> ▪ <i>Monitoring and evaluation</i> ▪ <i>Provide progress reports and accounts to FGN and DP partners</i>
Private sector (i.e. stores and markets that will sell parts, drilling contractors)	<ul style="list-style-type: none"> ▪ <i>Provide good-quality services and goods to clients and customers</i> ▪ <i>Carry out construction of water supply and sanitation facilities.</i> ▪ <i>Provide consultancy services i.e. socio-economic reviews, hydrogeological studies, designs, construction supervision.</i> ▪ <i>Carry out training and production of promotional materials</i> ▪ <i>Supply of materials, pumps, etc.- In each LGA at least one vendor will be connected to the supply chain so that they can access and sell parts.</i> ▪ <i>Repairs and maintenance of water supply facilities</i> ▪ <i>Financing and Management of WASH facilities</i>
CBOs	<ul style="list-style-type: none"> ▪ <i>Assist communities financially and/or technically to meet their responsibilities as WASH consumers (see above)</i> ▪ <i>Offer support in a manner consistent with FGN's and States' policies and strategies</i>
NGOs	<ul style="list-style-type: none"> ▪ <i>Carry out training of and support communities meet their responsibilities as WASH consumers</i>

Stakeholder	Engagement: Basic Roles and Responsibilities
	<ul style="list-style-type: none"> ▪ <i>Carry out socio economic reviews, hydrogeological studies, designs</i> ▪ <i>Develop training and promotional materials</i> ▪ <i>Carry out construction of water and sanitation facilities</i> ▪ <i>Provide financial support to Communities and Local governments in a manner consistent with FGN's and States' policies and strategies</i>
Development Partners and/or donors	<ul style="list-style-type: none"> ▪ <i>Provide financing</i> ▪ <i>Support government sector reforms including development of policy, strategy and regulatory frameworks</i> ▪ <i>Support intuitional reforms and capacity building at national and sub-national levels</i>

Note: Please note the roles and responsibilities in italics are not under the direct mandate of THE WADA PROJECT.

THE WADA PROJECT will also collaborate with State RUWASSA and the Departments of Water Supply (DWS) and Water Quality Control and Sanitation (DWQ&S) within the Federal ministry of water resources who have primary responsible for the Rural WASH subsector.

PfD will engage all relevant State Ministries/Agencies, LGA departments/units (WASH units/Department, Primary Healthcare Department, Department of Community and Social development, Women and Youth Affairs) and Community structures (Community Development Associations, Ward/Village Development Community, Council of Chiefs) in Cross River and Abia State to ensure alignment with goals and long-term sustainability. The Federal and selected State Governments have made significant efforts to promote WASH and PfD, through THE WADA PROJECT, will support these goals.

3.1. National/Local Government (200 words)

- i. *What are the government's goals/priorities for the sectors related to the project's desired outcomes? How does the project align with these goals?*

In January 2016, the World Economic Forum, whose membership is made up of Heads of State, CEOs, and leaders of civil society organizations, released its global risks report, which ranked water crises as the top global risk to industry and society over the next decade. The United Nations, in 2015, also noted that countries where open defecation is most widely practiced are the same countries with the highest level of poverty, high number of under-five child deaths, and large wealth disparities. Water and Sanitation will therefore be significant factors in driving economic growth and human development in developing countries over the next decade.

In Nigeria, successive Governments, in collaboration with development partners, have contributed to efforts geared towards improving access to water supply and sanitation services, and successes have been recorded in a number of areas, with access to water presently at 69%, and sanitation at 29%. However, with an increasing population and a drive to self-sufficiency in food production, the demand for water supply and sanitation services will continue to increase, thereby requiring an innovative and holistic approach towards closing the access gaps. In rural areas in particular, where access to water is at 57% and sanitation at 25%, a systematic approach that will coordinate and target stakeholder inputs will provide the opportunity for the delivery of sustainable rural water supply and sanitation services in Nigeria.

In May 2016, the government of Nigeria through Partnership for Expanded Water Supply, Sanitation and Hygiene (PEWASH) developed a Program Strategy for the WASH Sector for 2016 - 2030. PEWASH is a National Multi-sectoral collaboration for the improvement of rural water supply, sanitation and hygiene towards the achievement of the sustainable development goals and poverty reduction in Nigeria. This document highlights the government's goals and priorities for the sector - to contribute to improvements in public health and eradication of poverty in Nigeria through equitable and sustainable WASH interventions. Current priorities include:

- i. All rural inhabitants have access to sustainable & safe water
- ii. No Open Defecation in Nigeria
- iii. All rural inhabitants have access to improved sanitation & have place for hand-washing with soap and water
- iv. Improvements in public health of rural Nigerians, especially in the rural areas
- v. Improvements in quality of life for rural Nigerians
- vi. Reduction in stunting of under-5 children from the rural areas
- vii. Reduction in poverty in the rural areas
- viii. Improvements in girl's enrolment and attendance in schools

This project's activities and expected outcomes align with these set goals and priorities and will contribute to achieving these objectives.

- ii. What role will the government play in project development and implementation? What will be their role in the project's long-term sustainability? If government stakeholders are not involved, please explain why not.*

PfD will key into the National and State WASH strategy for the provision and promotion of sustainable WASH services. For long-term sustainability, the project will involve State and LGA WASH related development, implementing partners and agencies, Cross River and Abia State RUWASSA, Ministry of Health, Ministry of Education, two LGAs/WASH units from each state and private sector. Their roles and responsibilities will include facilitation of WASH intervention, creating an enabling environment through policy direction, and provision of technical and counterpart support (in-cash/kind).

The project will focus on rehabilitation and construction of water and sanitation facilities in the selected communities, which is linked with the priority of the government to provide access to safe drinking water to rural communities as well as ensuring that the communities are open defecation free. The selection of LGAs was done in collaboration with the state governments and the criteria for selection of communities and siting of facilities will be developed in consultation with the state and local government stakeholders. Such engagement from the onset of project development will ensure the critical buy-in needed during implementation and monitoring. For long-term sustainability, the state and local governments will be assigned the responsible for monitoring the functionality of the WASH facilities sited in the communities at regular intervals and where necessary be responsible for mobilizing community members for maintenance and repairs. This will be through a feedback mechanism with the communities, through the WASHCOMs, providing regular updates to the LGAs and the LGAs regularly updating the state RUWASSA and vice versa. THE WADA PROJECT was developed with support from the government and it will be implemented with their support; they will be involved in each stage of the project.

3.2. Service/System Developer (300 words)

Federal level: The Partnership for Expanded Water Supply, Sanitation and Hygiene (PEWASH) is a National collaboration for the improvement of access to water supply and sanitation in Nigeria, through a structured multi-sector partnership. PEWASH is designed to build on previous efforts and complement existing water supply and sanitation strategies by instituting a coordination and prioritization framework for project delivery. It will also provide an opportunity for the water and sanitation sector to leverage the plentitude of expertise, technology, and financial resources from the government (Federal, State, and Local), development partners, the private sector, civil society and community. The 15 year programme has been broken down into three phases, with Phase-I (2016-18) being the preparatory phase; phase-II (2019-2025) being the expansion phase and finally phase-III (2026-2030) is the acceleration phase. Through this strategy, Nigeria aims to eliminate open defecation by 2025 and achieve 100% access to rural water supply and improved sanitation by 2030. The Federal Government is committed to realizing the ambitious targets of PEWASH, and we will encourage all stakeholders to join us in the drive towards improving public health and creating wealth for Nigerians.¹²

State level: The Rural Water Supply and Sanitation Agency (RUWASSA) is the nodal agency of the State Government responsible for implementing the National Policy on water and sanitation. RUWASSA is also responsible for regulating, coordinating, and setting standards for the construction of latrines and other sanitation facilities. They promote, devise, and innovate low cost appropriate technology options for communities and assist in choosing the most appropriate options in rural water supply and sanitation. They also assist in eradicating water borne and sanitation related diseases. They prepare and continuously update the rural water supply and sanitation master plan and coordinate its implementation for the state. Cross River does have a water policy on file and Abia state has one in draft form that they promised to share the WADA project team for inputs. PfD held discussions with Cross River and Abia states RUWASSA and they contributed in the development of this project as part of their oversight function of ensuring access to and utilization of quality WASH services and in line with their respective state priorities for this sector. Hence, the project activities are well aligned with the various states rural WASH priorities.

- i. *How does the project support the mandated service/system developer? How will the service developer replicate project activities post-implementation? How will the service/system developer's capacity to carry out their mandate be improved as a result of this project? Please explain how.*

One of the mandates of RUWASSA is to provide quality drinking water and sanitation facilities to the rural communities. This project will contribute to the various states RUWASSA goals/objectives of providing communities with safe drinking water and sanitation facilities through planned activities – construction/rehabilitation of water and sanitation facilities, promotion of hygiene education, etc.

During project implementation, the project will assess capacity gaps within the service/system developers (RUWASSA, LGA) and provide targeted interventions, including structured trainings, to

¹² Partnership for Expanded Water Supply, Sanitation & Hygiene (PEWASH) Programme Strategy 2016 – 2030.

address such capacity gaps. All activities from diagnostic reports to capacity development plans and intervention reports will be well documented to serve as reference documents for future projects/interventions. The project will explore the possibility of locating state offices within the various RUWASSA office locations to pay closer attention to their activities and involve relevant RUWASSA personnel in day-to-day management of project activities while addressing issues of documentation, mapping, and geophysical surveys for the selected LGAs at the very least. The project will also engage and train RUWASSA and LGA personnel to conduct relevant trainings targeted at the communities including trainings on community-led total sanitation (CLTS); guidelines for formation and management of community WASHCOMs; water storage, quality management and treatment; hygiene promotion; VLOM; etc. At the end of the project, these service/system developers will be better positioned to monitor and even replicate project activities post-implementation.

In all the selected communities, the WADA Project will contribute to the over-arching goal of the Partnership for Expanded Water Supply, Sanitation and Hygiene (PEWASH) programme: to contribute to improvements in public health and eradication of poverty in Nigeria through equitable and sustainable WASH interventions. Nigeria is committed to attaining the SDG-6 targets for water and sanitation by 2030. The PEWASH programme is specifically aimed at achieving SDG-6.1 and 6.2 targets in the rural areas through a multi-sectoral partnership while supporting the empowerment of rural dwellers in Nigeria.

- ii. What role will the service/system developer play in project development and implementation? What will their role be in the project's long-term sustainability? If service/system developers are not involved, please explain why not.*

The project LGAs and proposed activities were developed with support from the state RUWASSA. Their priorities have also been addressed during the development of this project. The project will be implemented with support from RUWASSA and LGA level WASH Unit. The proposed project will promote village or community level ownership, operation and maintenance of WASH facilities as is the priority of the state RUWASSA and LGAs. RUWASSA and LGAs will be responsible for mobilizing communities for VLOM and regular monitoring for sustainability.

See also the Basic roles and responsibilities of selected stakeholders and the section on stakeholders.

3.3. Community

- i. What are the community's interests regarding development of the service or system in question? How does this project align with these interests? Is there demonstrated demand in the community for the chosen activity? How is this evidenced?*

The communities are interested in access to improved water, sanitation and hygiene for all community members. The communities' interest regarding the development of the services was collectively expressed in the various Local Government Councils' letter of support to Pfd/WADA project during concept note development and also during site visits by WADA team to Abia and Cross River states. Community participation will begin with collective identification of local needs (for water, sanitation and hygiene), locally initiating a plan, collectively implementing the plan, communities' commitment to managing the facilities and taking the lead in planning and implementing activities like community-led total sanitation (CLTS), volunteer hygiene promotion (VHP), water safety plan, formation and sustenance of WASHCOMs, etc. The project is designed to

strengthen the capacity of the communities to own and manage targeted interventions including water and sanitation facilities sited within and to organize and manage volunteers within the communities to lead in the implementation of project activities.

- ii. *What role will community members play in project development and implementation? What will their role be in the project's long-term sustainability? If community members are not involved, please explain why not.*

The project will engage communities from project development through implementation and monitoring of interventions. This will help create the critical buy-in and ownership needed for successful project implementation. Various structures within the communities – existing women's group, youth, community leadership, etc. - will be engaged in discussions during needs assessment, project development, and implementation and their priorities and needs given consideration in project interventions. Opportunities will be offered to some members of these women and youth groups that are not part of the WASHCOMs to participate in economic empowerment trainings targeted at community members. The project will target working with Water Sanitation and Hygiene Committees (WASHCOM) based on the national guidelines and will facilitate formation and training of WASHCOMs in communities where they do not exist. On behalf of communities, WASHCOM will be:

- Receiving WASH program and projects on behalf of the community and facilitating the signing of any agreement by the community leaders; Liaising with the community to select sites for WASH projects in the community; Liaising with the community to fix and collect water tariff, where the law permits, in respect of water facilities built through the effort or contribution of the community or/and the WASHCOM; and the tariff so collected shall be used for the purpose of maintaining the facilities;
- Monitoring WASH facilities in the community during and after construction;
- Collecting and giving feedback to the community on relevant WASH activities that affect the community;
- Opening and maintaining bank account for the purpose of lodging funds collected by WASHCOM for the purpose of building or maintaining WASH facilities or running WASH programs;
- Mobilizing the community and other relevant organizations and concerned individuals to pay any counterpart fund contribution to the appropriate authorities when it may be required for the carrying out of any WASH project or program;
- Coordinating all WASH activities in the community;
- Operating and Maintaining of WASH project facilities in the community put under its care;
- Overseeing and supporting the activities of volunteer hygiene promoters and clubs in the community;
- Working to ensure that the community attains total sanitation;¹³
- Participating in the formation and administration of the Federation of WASHCOM at the Local Government Area (LGA) level; and

¹³ Total Sanitation encompasses the use of latrines, and the stopping of open defecation; as well as improvement in personal, domestic and environmental hygiene.

- Participating, when invited, in the programme and events of Federation of WASHCOM at all levels and acting as liaison between the community and the LGA, particularly working with the LGA WASH Department/Unit to achieve the objectives of WASHCOM.

Primary beneficiaries will include 10 rural communities from each of the 4 selected LGA and 150,000 beneficiaries involving 25,000 households (Ave. 6 persons/HH). The priority will be to locate new facilities or rehabilitate existing ones within health care facilities, schools, and/or other public places within the communities so as to complement other public health or educational initiatives as well as better security of investments.

Coca-Cola and USAID

Formed in 2005, WADA is a unique partnership between The Coca-Cola Company (TCCC) and the U.S. Agency for International Development (USAID) that addresses community water needs in developing countries around the world. The outcomes of THE WADA PROJECT in Nigeria will support the goals and objectives of all of these programs. This program will support USAID and TCCC's WADA objectives of:

- Establish participatory, sustainable management of water and watershed resources for domestic and productive use and conserve the ecosystems and biodiversity they support;
- Increase the level of access to sustainable, improved sources of water and sanitation services in communities around the world;
- Increase institutional capacity and investments in basic infrastructure;
- Foster improved behaviors in human sanitation and hygiene for positive health impacts.

Feeding into USAID/Nigeria's activities that reduce child mortality and increase school attendance and literacy, the expected goal of this project is to support quality educational and healthcare environments, especially for girls and women, improve hygiene and reduce water-related illnesses in the beneficiary communities. Two of the main focus areas under USAID's are:

- Expanding access to water supply and sanitation to promote better hygiene and fight preventable disease, especially to vulnerable communities;
- Improving water resource management and reforming governance and regulations to equitably share access and defuse competition

i. What role(s) will the Coca-Cola System (bottlers, country offices, franchises, Business Units and/or Foundations) and USAID (Mission, regional programs and/or Central office) play in project development and implementation? What will their role(s) be in the project's long-term sustainability? If they are not involved, please explain why not.

There will be a number of opportunities for involvement and engagement by USAID and Coca-Cola including:

- Linkage created to other Coca-Cola programs such as the women's empowerment program or the program that promotes bottle collection
- Linkage created with USAID health projects
- Supporting WASHCOM training by sending an industry expert.
- Working with USAID priority health centers
- Participation in campaigns and events

- ii. *What specific project activities will present engagement opportunities for the Coca-Cola and USAID?*

In addition to those mentioned above, PfD would welcome engagement at the highest levels of government and with the private sector to promote lessons learned and best practices. Both Coca Cola and USAID will be invited for project launch activities and during the handover of completed water and/or sanitation facilities (at dates scheduled with both donors' input).

3.4. Other Stakeholders

Other notable stakeholders and agencies supporting the sector also include: European Union-Water Supply Sanitation and Sector reform program (EU-WSSRP), UNICEF, World Bank, Global Sanitation Fund (GSF), Concern Universal (CU) and possibly others. They are all encouraging the communities to demand, plan and contribute to the construction, operation and maintenance of rural WSS facilities.

See also the Basic roles and responsibilities of selected stakeholders and the section on stakeholders.

4. Project Sustainability

4.1. Service/System Operation

Sustainability of WASH project interventions will be guided by the sustainability principles that includes: choice of appropriate technology; use of information communication for real-time and up-to-date tracking of WASH interventions; deploying third party monitoring/verification processes to ensure quality of interventions and reliable reporting; community engagement right from inception stage of the WASH interventions; strong institutions; and capacitated staff at all levels. The project will engage various combinations of the principles above, as feasible.

PfD has put a high value on behavior change and community engagement as these two components were largely missing from past projects. PfD's modus operandi is to focus on community engagement as we have found that it is critical to achieving sustainable results. As noted in the project timeline, there will be a heavy focus on capacity building, community engagement and behavior change.

The basic essence of community engagement in WASH is to engender ownership and sustainability of WASH projects. PfD will ensure effective participation to help provoke dialogue and social equity, build capacities in communities, enhance capabilities of people to play roles in their societies' development and make communities progress towards self-reliance in providing WASH Services and promoting uptake of child survival services.

PfD/WADA identified ownership and community participation as basic to Sustainability. Community WASH project management will be in two parts; facility management and integrated services demand management.

Project/Facility management will involve the following:

- **Construction:** During construction at identified project sites, communities will know the project designs and specification. WASHCOM monitors the construction using community WASH project monitoring checklist to record specification (e.g. drill depth measured by number of casings installed, nature and size of gravel used, materials, mixture of sand to cement, start date and completion date, etc.). Community ensures security of the equipment and materials.
- **Operation:** Community will appoint facilities caretakers, regulates the use of facilities, collects water user fees as applicable and maintains sanitation around the facility.
- **Maintenance:** Community artisans carry out routine checks, carry out repairs of facilities, arrange replacement of parts etc. They also contact the area mechanic and spare parts supplier, report breakdown that are beyond their capacity to Local Government WASH Department/Unit and ensure that water points remain functional.
- WASHCOM and artisans develop facility management plan and oversee facility/project management but the community may decide to engage the services of a private partner (CBO, FBO etc.) under a service agreement.

Integrated services delivery management involves;

- **Mobilization:** Collective decision/legislation to ensure the availability, and demand for basic social services as well as sustaining practices that contribute to wellbeing of community people. Examples are community led total sanitation (CLTS), house to house hygiene promotion, and support to VHP, TfD, WSP, CBMR, ANC, Birth registration, polio vaccination, exclusive breastfeeding, use of ITN, food supplementation.
- **Community Dialogue:** Involves active engagement of the community people by their leadership to understand and plan for changes based on their identified needs in WASH, Child survival and Development.
- **Organization:** Involves active enforcement of community decisions.

Over the years, the sustainability of WASHCOMs has been a major challenge. Lack of a module to ensure formidability, legitimacy and assertiveness of WASHCOMs has made it difficult for WASHCOMs to exude compliance to WASH principles for most community people. PfD will utilize the new manual for WASHCOM formation and management that includes modalities for the pursuit of formal identity, strengthened legitimacy, voice and accountability for establishment and training of WASHCOMs. PfD will train/re-train and mentor State RUWASSA, LGA WASH team and WASHCOM members on the expanded WASHCOM formation and training manual to effectively monitor, report and sustain the project during and after implementation.

Table 2: Below are training and mentoring program for WASH Personnel

Stakeholders	Capacity building needs
Community/ WASHCOM	<ul style="list-style-type: none"> • WASHCOM roles & responsibilities • Management of WASH facilities (including sanitary risk inspection, water quality monitoring) • Sanitation & Hygiene promotion • Monitoring/ Reporting
LGA	<ul style="list-style-type: none"> • Planning and budgeting for 100% access to rural WASH services • Implementation of WASH interventions (hardware, hygiene promotion,

	CLTS, etc.) <ul style="list-style-type: none"> • Establishment of WASHCOMs and its training • Water quality monitoring & surveillance • Monitoring & Reporting
State	<ul style="list-style-type: none"> • Policy implementation • Coordination of rural WASH programs • Planning of the state rural WASH sector • Advocacy/ mobilization of resources • Quality assurance, Monitoring & evaluation • Reporting • Water quality monitoring & surveillance • Technical support to LGAs in the implementation of WASH interventions

The respective LGA authorities’/WASH departments/units and State RUWASSA will provide supervisory and mentoring support through to the trained WASHCOM and other service providers/VLOMs in the communities where water and sanitation facilities are constructed or rehabilitated. They will also include the various training modules within their yearly operation for scale up to other locations. PfD will work closely with these bodies to improve their coordination, organization and responsiveness to the needs of the communities which they serve.

Post implementation, the developed WASH facilities and services will be handed over to WASHCOMs at the community level. The WASHCOMs will have a caretaker who will be responsible for day-to-day operation and maintenance of the systems. Training will include info on the financial incentives necessary to make monitoring and O+M sustained after project closeout. The caretaker will be trained for operation and maintenance processes before handing over of the facilities. The responsibility of O & M will be transferred to the WASHCOMs after the completion of 100% construction of the system. The WASHCOMs will be trained and mobilized for collecting user charges from the community. An agreement will be signed between the project and the communities/WASHCOM regarding handing over of the maintenance responsibility.

The WASHCOMS will have Bank Account. They will be encouraged to collect user charges from the community members where necessary and the money will be deposited to the bank. This money will be utilized in case of any breakdown. The WASHCOMs will have a Chairman, Secretary and Treasurer. They will also represent some women members from the community.

Overall monitoring of the project will be done by State RUWASSA and LGA WASH unit.

4.2. Lifecycle Costing

During the WASHCOM training, PfD will work with the community to determine what model works best for them. During the training PfD will provide communities with a series of choices for different water service levels, different tariff structures, pay-per-household, or pay-as-you-go. Because we know that cost is a major barrier to sustainability, PfD will make sure that:

- Maintenance costs are low by training community members as mechanics and artisans
- Low-cost solutions are available

- Community has demonstrated their ability to pay by starting a WASHCOM account with funds before any hardware is installed
- Parts for repair are available locally

In order for this project to be sustainable, the communities themselves will be responsible for the funds. The community WASHCOMs will be trained on the management of funds and their communities will hold them accountable.

Table 3: Lifecycle Costing

Expenditure	Total Cost (10 years)	Description	Annual Cost	Source(s) of Funding
Capital Investment	Estimated \$416,000 for the infrastructure portion of the project	THE WADA PROJECT funding		Coca-Cola and USAID
Operational Expenditure	\$226,560	Community WASH O & M	\$22,656	Community
Capital Maintenance Expenditure(best estimates)	\$3288,000	LGA/RUWASSA WASH budget	\$328,800	LGA/RUWASSA
Direct Support	\$26,800	LGA/RUWASSA WASH M&E budget	\$2,680	LGA/RUWASSA

Terminology Definitions

- *Capital Investment:* Initial installation, construction, or development of any infrastructure or materials. This is a one-time cost, and will not change over 10 years.
- *Operational Expenditure:* Occasional minor repairs or improvements, as well as regularly recurring costs (staff, expendable materials, etc.).
- *Capital Maintenance Expenditure:* Major system improvement or replacement.
- *Direct support:* Ongoing support (possibly by circuit rider(s), district authorities, etc.) for management structures, including technical support, administrative and organizational support, conflict resolution, re-training, connection to resources, etc.

Above are the best estimates based on current costs as provided in discussions with LGAs and communities. PfD is using low-cost, easy-to-fix solutions and therefore the estimate provides a best guess in the case that a number of facilities need upkeep and maintenance. If properly cared for, most facilities will require little maintenance, but costs have been included here nonetheless.

These costs are best estimates barring any major damage, they are best estimates based on current costs from communities, and LGA/RUWASSA personnel that work with and are familiar with these facilities (hand pumps and sanitation facilities).

The calculation for the cost is as follows:

Category	Description	Annually USD/Unit	Total for 64 Units/Annum	Total for 10 years	Assumptions
Operational Expenditure	Basic maintenance and caretaker costs	\$161	\$10,304	\$103,040	Covers maintenance pumps
Operational Expenditure	Basic maintenance and caretaker costs	\$193	\$12,352	\$123,520	Covers maintenance pumps
Capital Expenditure	Cost of major repairs/replacements	\$200	\$12,800	\$128,000	Assuming 50% need major replacement
Capital Expenditure	Cost of major repairs/replacements	\$250	\$16,000	\$160,000	Assuming 50% facilities need emptying soak
Direct Support	LGA and RUWASSA staff time, training and transport costs	\$2,679	\$2,679	\$26,790	

4.3. Environmental Sustainability and Risk Mitigation

The project is environmentally sustainable as it will promote hand pump boreholes, wherever feasible, rather than solar/motorized boreholes. Hand pump boreholes are not very deep and the ground water level does not get affected. In case of solar/motorized boreholes the community members fetch more water thus affecting the level of ground water. Platforms, drains and soak pits will be constructed with the hand pumps for proper disposal of waste water for the sake of hygiene and to prevent breeding of mosquitos in the community.

The project will also promote low cost toilet options, which will dispose the human excreta in the soil. The human excreta will not be drained to streams or rivers and thus the surface water will not be polluted. The ground water will also not be polluted as the depth of the pit will be of only 1 meter. The toilets will be situated minimum 10 meter away from the drinking water sources to prevent contamination. For sanitation facilities to be constructed/rehabilitated by project, there will be the standard Environmental Impact Assessment (EIA), but this might not be same for constructions by community members. The project will empower the WASHCOMs to be able to guide community members on construction of appropriate sanitation facilities and taking into account basic environmental mitigation measures.

Water testing (quantity) will be done in the beginning for ensuring that adequate amount of water is there in the borehole. The quality of the water will be tested in the beginning and after every quarter to ensure that there are no bacteriological or chemical contaminants. The tests will be done in a government recognized laboratory. Cross River state has a testing facility set up and PfD will work with RUWASA and UNICEF to expand that testing to the targeted communities. There was no evidence of a testing facility in Abia state. PfD will ensure that laboratories for water testing have, at the very least, national certification.

5. Partner Overview

5.1. Prior Sector-specific Interventions

Working in Nigeria since 1999, using a local partnership approach, Pfd has collaborated with and built the capacity of over 40 local organizations to create sustainable solutions to the urgent economic, health, and social development challenges. In addition to Pfd's direct implementation in the highlighted states to the right, the work of our partner network spans across 30 states in all regions of the country.

In addition to Pfd's contribution to the ongoing UNICEF-funded WASH program in Nigeria, it has extensive past experience implementing WASH-related programs in Cambodia. In 2002, Pfd partnered with the World Bank's Water and Sanitation Program (WSP) and Cambodia's Ministry of Rural Development (MRD) in creating national policy for rural water supply and sanitation. With funding from USAID, the World Bank,

UNICEF, AUSAID and CIDA, Pfd's water sanitation and hygiene projects have ranged from supporting local participants in constructing latrines, hand-pump wells and household water filters to developing various water sanitation and hygiene training programs and school curricula. Given Pfd's deep organizational history in implementing community-based health programming and with geographic coverage including Northern Nigeria and the Niger Delta, it is well positioned to add significant value to WASH programs in Nigeria.

With global and national experience in empowerment and institutional capacity building of community structures and local organizations, including strengthening capacity of 449 community WASHCOMs and developing systems to drive community-centered WASH service delivery in Delta, Edo and Ekiti states, Pfd will use best practices and national guidelines on WASH services in delivering its interventions in the target locations. Pfd will also engage the State Governments of Cross River and Abia not only to contribute to the project efforts, but also to expand and scale up access to safe, affordable, sustainable and reliable water and sanitation services in other rural communities of these states. Coordination and collaboration at all levels will be key to the success of this project and with Pfd's experience working in and understanding of local communities in Nigeria.

Tulsi Chanrai Foundation (TCF) will employ its experience working in over 20 states in Nigeria in the construction and rehabilitation of water and sanitation facilities; as well as training participants selected by the communities themselves on Village Level Operation and Maintenance (VLOM) of these rehabilitated or newly installed facilities. The 'Water Program' of TCF (initiated in 1996) is unique in Nigeria, it is ensuring cost effective means to provide clean drinking water to the rural



population in the country. The program focuses on rehabilitation of existing drinking water facilities rather than drilling new boreholes and inculcating a maintenance culture with the community. The critical component of TCF 'Water Program' is community engagement. In the last 20 years, with the rehabilitation of 4,384 hand pumps and 84 solar/electric motorized boreholes in 161 Local Government Areas of 24 States of Nigeria, the program has benefitted over 2.20 million remote Nigerian people. The proposed program is in the same context and TCF has presence in Cross River State through its Health, Eye and Water Programs. The past projects were implemented by TCF with support from UNICEF, Federal Ministry of Water Resources, State Government and other like-minded donors. The project targets were achieved and the projects were closed after due process. The main lessons learnt by TCF are:

- Conjoint approach should be adopted in the promotion of WASH. Those Communities where water facilities are getting rehabilitated should immediately be triggered for safe disposal of human excreta using CLTS approach and hand washing with soap by the promotion of Tippy Taps.
- Safe disposal of wastewater is a challenge immediately after rehabilitation of water facilities. The wastewater should be diverted to soak pits or kitchen gardens. Soak pits should also be constructed during the construction of platform and drainage.
- Community members should collect funds on monthly basis through the WASHCOMs for ensuring smooth operation and maintenance of water facilities.
- Device an incentive based reward system for caretakers to encourage monitoring and maintenance of water source.
- Monitoring visits should be done by State Government, Donors and LGA representatives to improve coordination and quality of work.

TCF did monitoring of 1,000 rehabilitated hand pumps a year ago and over 80% of them were found functional. TCF is currently supervising 542 rehabilitated hand pumps in Kebbi, Katsina, Cross River, Niger, Ekiti, Anambra and Benue States through VLDM. 81% of these hand pumps are functional. TCF has Community Mobilization Officers in those Communities for mobilizing the WASHCOMs in case of any break down. TCF had also trained more than 300 Local Area Mechanics (LAMs) in 161 Local Government Area(LGAs) of 24 States of the country on repair and maintenance of hand pump boreholes. They were also involved during the rehabilitation process for hands on training. The community members can directly contact them in case of any major or minor repair work. TCF had also established hand pump spare parts outlets in each of the LGAs for ensuring supply of fast moving spare parts.

5.2. Relationship with the Key Stakeholders

PfD has been operational in Nigeria since 1999/2000 and has built a strong network of development partners (including international and local NGO, CBO, etc.) through implementation of its integrated programs and will engage this network and other linkages provided by USAID and Coca Cola in the implementation of this project. During the scoping for the development of the concept notes for this project and subsequently in a reconnaissance visit with WADA team, PfD met with relevant stakeholders (state leadership, RUWASSA, LGA and some communities) for this project to discuss priorities and needs and thereby built a mutual relationship with an understanding of collaboration, partnership and work ethics. During this period, PfD has developed

a collaborative understanding and have gained the confidence and buy-in of the various state leadership (met with the governors and commissioners responsible for WASH activities) that is essential for successful implementation of this project. This is evident in the letters of support provided by the various LGA.

PfD is also collaborating with Tulsu Chanrai Foundation (TCF) - as sub partner on this project. TCF as one of the leading agencies in Nigeria has a very good relationship with Cross River State government at the State and Local Government levels through its Health, Eye Care and Water Programs. TCF has implemented its Water Program in 24 states in the country including Cross River and has good relationship with the local communities in the targeted areas. TCF has also been working with the private sector including linkages to and set up of supply chain for spare parts required for maintenance and repairs of water and sanitation facility construction and rehabilitation and will bring this expertise to play in the implementation of this project. This relationship was developed during the hand pump rehabilitation project implemented by TCF a few years back. TCF has good relationships with the traditional leaders, community leaders, village committees and village chief in the region due to its charity work.

6. Time, Scope, and Budget

See attached.

7. Linkages to USAID & TCCC's Sustainability Initiatives and Objectives

7.1. USAID Linkages

Feeding into USAID/Nigeria's activities that reduce child mortality and increase school attendance and literacy, the expected goal of this project is to support quality educational and healthcare environments, especially for girls and women, improve hygiene and reduce water-related illnesses in the beneficiary communities.

Two of the main focus areas under USAID are:

- Expanding access to water supply and sanitation to promote better hygiene and fight preventable disease, especially to vulnerable communities;
- Improving water resource management and reforming governance and regulations to equitably share access and defuse competition

This program will also support USAID and TCCC's WADA objectives of:

- Establish participatory, sustainable management of water and watershed resources for domestic and productive use and conserve the ecosystems and biodiversity they support;
- Increase the level of access to sustainable, improved sources of water and sanitation services in communities around the world;
- Increase institutional capacity and investments in basic infrastructure;
- Foster improved behaviors in human sanitation and hygiene for positive health impacts.

7.2 Women's Economic Empowerment

Evidence from several FinScope studies in Africa suggests that less than half the population has access to any form of business and financial services, whether formal or informal. Those that have

access to banks and Microfinance Institutions (MFI) are mainly found in urban and peri-urban areas, or high-density rural areas that are usually served by a functioning road infrastructure. The rural poor, as a result, are disproportionately denied access. Lack of business skills and financial resources is a major limiting factor for women accessing WASH services and economic empowerment raises their income and social status.

Since 2000, PfD has been working with communities and local partners to implement integrated interventions whenever feasible. PfD hypothesized that if both livelihood and health related assistance is offered simultaneously, the impact will be mutually reinforcing: families would have improved living standards, and women will have improved financial means to access health services. Knowing this, PfD will build on established community structures such as WASHCOM, VLAM, and volunteer hygiene promoters (VHP) to empower women and youth through implementation of an integrated household economic strengthening model -Business Development Skills, Micro-Enterprise Fundamental, Community Managed Micro Finance (CMMF), Village Savings and Loan Association (VSLA)- and WASH interventions. This will not only impact women, youth, and their families' standard of living, it will also contribute to the improvement of the health and socio-economic status of the community.

At project start up, PfD will identify, engage and train community-based field officers and village agents (as volunteers) from communities of the selected LGAs in Abia and Cross River State to implement and deliver integrated CMMF using the VSLA model and WASH information and education to 2,000 women. PfD will work with relevant community structures to make provision for a business development skills training for women and/or facilitate micro-finance using Village Savings and Loans model for women and youth in WASHCOM, LAM, and VHP.

PfD will also explore the various entrepreneurship programs for youth and women in rural communities including those available within Coca Cola Foundation to promote youth and women economic empowerment.

7.3. Youth Empowerment (150 words)

The project will make deliberate efforts for the empowerment of youth age 15 – 24 both male and female through training and engagement by community members as Village Savings and Loans Agents (VSLA)/field facilitators; Local Area Mechanic (LAM) and water vendors. The project will develop a pool of resourceful youth in collaboration with Community WASHCOMs for communities to meaningfully engage them as service providers for the operation and maintenance of water and sanitation facilities. Youth trained as LAM and water vendors will have the necessary skill sets to use such as income generating enterprise with potential for growth/expansion/employment of additional labor, while also providing sustainable services to their communities. Those trained on financial literacy and/or as VSLA will have access to additional resources to address the numerous family and personal needs.

PfD will also explore the various entrepreneurship programs for youth and women in rural communities including those available within Coca Cola Foundation to promote youth and women economic empowerment.

7.4. Co-finance

Table 4: Co-finance

	Source of Co-finance (in-kind or use of current equipment)	Amount (\$)	Description of Activities
1	PfD	\$39,243 in-kind	Value of two vehicles (in Abuja) and other office equipment already procured (in Abuja).
2	Communities	Estimated at around \$100,000 total – in-kind.	Value of community costs for: construction of Hand pump boreholes; construction of VIP Latrine; space for community based trainings; and community volunteers time
	Cross River State RUWASSA	\$86,858	Likely will include: office space and staff time. Need to confirm with Cross River RUWASSA. This amount may change. We will push for both states to be actively involved where and when possible, but the project is not contingent on this support.
	TCF	\$10,029 – in-kind	TCF will provide cost share of staff time, vehicle use, materials and resources.

Estimate of Cross River State RUWASSA In-Kind Support:

Description	USD/Yr	Life of Project
Office space - Partial	\$ 9,600	\$ 19,200
Utilities - Partial	\$ 2,400	\$ 4,800
Staff time (geologist)	\$ 14,286	\$ 28,572
Staff time (supervision/training)	\$ 17,143	\$ 34,286
Total (project support)	\$ 43,429	\$ 86,858

8. Communications

Communications Strategy

Audience	Communications Methods	Messages
Primary audience: Donors and Stakeholders including federal government, private sector, development partners	Project reports; knowledge and sector learning management; and deliverables documented	M&E documentation, reports, success stories and publications on best practices
Secondary audience: NGOs, CBOs, other WASH implementers	Project best practices; learning alliances	Publications on best practices and lessons learned
Program beneficiaries:	Water management campaigns,	Importance and benefits of

Community WASH consumers and users, WASHCOMs, LGAs, RUWASSA	<i>sanitation and hygiene campaigns, Celebration of special events: e.g. World Water Day, World Hand Washing Day, World Environment Day, World Toilet Day, etc. via posters, BCC, events, meetings, house-to-house education, in-school education, radio, peer education, community dialogue, etc.</i>	<i>improved WASH, CLTS, information at various levels (i.e.: LGA to community and vice versa), BCC</i>
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- i. Will there be any other groups whose logo or identity the recipient will use on program materials and related communications?*

Various project reports and deliverables will include the PfD logo. PfD will also encourage the government at all levels to take ownership of the work and the national coat of arm will be included on the various program and related communications materials.

- ii. How will direct involvement from a host-country government ministry be represented?*

PfD will encourage the government at all levels to take ownership of the work and will include the national coat of arms in various program and related communication materials.

- iii. How will the implementing partner ensure that all stakeholders understand USAID/Coca-Cola's role in funding the project?*

As demonstrated during the reconnaissance visits, all donors/partners on these projects will be duly acknowledged during meetings. Also, all program and related communication materials will be branded with USAID/Coca Cola logos in addition to the national coat of arms and PfD logo.

- iv. Please describe how you will mark the following:*
 - a. Project sites.*

PfD will consult with the WADA team to determine preferred branding options for sites. This is important as PfD may be rehabilitating facilities initially constructed by other donors besides the need to build the culture of community ownership.

- b. Promotional materials.*

Promotional materials will include note that the funding was provided by USAID and Coca-Cola and logos will be included where applicable. NFIs will not be marked.

- c. Project-specific events and workshops.*

At project specific events and workshops, the project will have flex banners with the agreed upon logos of WADA partners and the national coat of arms; also containing the title, venue and date of the event hung/displayed conspicuously. At various events we will connect with both Coca-Cola and USAID to see what, if anything, they would like to contribute. For example, at events a USAID-funded project staff member would like to speak or perhaps Coca-Cola would like to run a training on their women's entrepreneurship program.

- d. *Technical assistance, studies, reports, papers, publications, audio-visual productions, public service announcements and other promotional, informational, media, or communications products.*

Technical assistance, studies, reports, papers, publications, audio-visual productions, public service announcements and other promotional, informational, media, or communications products materials will note that the funding was provided by USAID and Coca-Cola and logos will be included in addition to the national coat of arms where applicable. NFIs will not be marked.

- v. *How will lessons learned from project implementation be shared with the local community, local governments and/or the greater WASH community?*

PfD will facilitate WASH Learning Alliance (Clinics) sessions during which community WASHCOMs will come together at wards and LGA levels to discuss WASH issues, share experiences, best practices and lessons learned. It will also serve as a mechanism for social bonding and peace building among communities. The WASHCOMs will then be mandated to disseminate shared information with their community members. PfD will also have exchange visits and interactive review meetings between LGA and state governments for information dissemination.

10. Monitoring and Evaluation

PfD has reduced the number of key indicators to 11 from the total USAID Global Indicator list for WADA as a result of discussions with USAID.

Monitoring and Evaluation Table

USAID Program Objectives	USAID Indicator #	USAID Global Indicators	Project Target (Total)
IR1.1 – Increase first time and improved access to sustainable water supply	1	(3.1.8.1-2) Number of people gaining access to an improved drinking water source	56,000
	2	(3.1.8.1-1) Percent of households using an improved drinking water source	70%
	3	(3.1.8-31) Percent of population using an improved drinking water source	50%
	4	(3.1.8.2-2) Number of people gaining access to an improved sanitation facility	80,000

IR1.2 – Increase first time and improved access to sustainable sanitation	5	(3.1.8.2-1) Percent of households using an improved sanitation facility ¹⁴	80%
	6	(3.1.8.2-3) Number of improved toilets in institutional settings	40
	7	(3.1.8-32) Percent of population using an improved sanitation facility	60%
	8	(3.1.6.8-3) Percent of population in target areas practicing open defecation	20%
	9	(3.1.6.8-4) Number of communities certified as “open defecation free” (as a result of USG assistance)	20
	11	(3.1.6.8-4) Number of liters of drinking water disinfected with point-of-use treatment products (as a result of USG assistance)	1.6million liters/day
	12	(3.1.6.8-1) Percent of households with soap and water at a handwashing station commonly used by family members	40%

***Please note that numbers will be revised following the baseline assessment.**

Number	Indicator	Expected Results	
1	Total # of people with full access ¹⁵ to improved water service levels ¹⁶ for household use:	# of Males	56,000
		# of Females	
2	Total # of people with limited access ¹⁷ to improved water service levels	# of Males	56,000
		# of Females	
		# of School Boys	
		# of School Girls	
		# of Clinic Patients & Workers	
3	Total # of people with access to improved sanitation facilities ¹⁸ :	# of Males	80,000
		# of Females	
		# of School Boys	
		# of School Girls	
		# of Clinic Patients & Workers	
4	Total # of people with demonstrated sustainable hygiene	# of Males	30,000
		# of Females	

¹⁴ Note that 5 above includes constructed/rehabilitated facilities.

¹⁵ Full access is defined by a minimum 20 liters of water/day/person for drinking and domestic uses of cooking, cleaning, and basic hygiene.

¹⁶ An overall improvement of water service level determined by the quality, quantity, reliability, affordability, and time to collect. Service levels are categorized as inadequate, basic, medium, or high. All water sources must meet minimum quantity and national quality standards.

¹⁷ Limited access is defined as a minimum 5 liters of water/day/person for drinking and domestic uses of cooking, cleaning, and basic hygiene.

¹⁸ sum total and just add a foot note that this includes RAIN 2020 M&E indicator 3 & 4

Number	Indicator	Expected Results	
	behavior change ¹⁹ :	# of School Boys	
		# of School Girls	
		# of Clinic Patients & Workers	
5	Total # of locations impacted by the RAIN project	Total #	40
6	Total # of people economically empowered (as defined by Coca Cola) through project activities ²⁰	# of Males	440
		# of Females	
		# of Male Youth	
		# of Female Youth	
8	% of annual operations and maintenance costs recovered.	Y1 - 0% Y2 - 50% In year 2 of the project, Pfd will ask the communities, LGAs and RUWASSA to have this amount budgeted. The amount will be paid by Pfd through WADA but the community will be expected to have this in their WASH account. That way they are slowly building up their WASH funds to pay for maintenance and repair prior to project close out.	
9	% of Water Management Committees (WMC)/WASHCOMs with knowledge of contacts for repairs that they cannot complete themselves	90%	

Please note the difference between total number of beneficiaries and number with improved water access. This is because the project will, in addition to the number of beneficiaries on sanitation facilities constructed/rehabilitated, facilitate education within the communities to encourage community members to construct their own improved latrines. This will therefore increase the number of sanitation facilities above the overlap number of beneficiaries (56,000). Also, during rehabilitation of facilities, there might be cases where the project will rehabilitate either a sanitation or water facility rather than both; unlike during construction where sanitation and water facility will be located close together in a community. Hence the difference in overlap.

Pfd aims to target 50% men and boys and 50% women and girls. The number of youth and clinic patients and workers will be determined after the community mapping has been completed. There is not currently enough population data that exists to determine the numbers for males, females and youth. Therefore, during the mapping Pfd will further define these targets.

***Please note that numbers will be revised following the baseline assessment.**

¹⁹ Demonstrated sustainable hygiene behavior change is determined through: participation in one training and one follow-up, identification of all five critical handwashing times, and presence of a specific place for handwashing where water and soap (or the appropriate alternatives) are available. All three of these qualifications must be met.

²⁰ Economic empowerment is determined by one or more of the following being accurate for beneficiaries: (1) provided with skills development training that promotes business building and employment opportunities, (2) provided access to assets and/or financial services, and (3) participated in community-based committees, networking and support groups.

11. Acronyms

ANC	Ante Natal Care
CBO	Community Based Organization
CLTS	Community-Led Total Sanitation
CBMR	Community-Based Monitoring and Reporting
CMMF	Community Managed Micro Finance
CRS	Cross River State
HCW	Health Care Worker
ITN	Insecticide Treated Nets
EHC	Environmental Health Club
EIA	Environmental Impact Assessment
ODF	Open Defecation Free
PfD	Partners for Development
LAM	Local Area Mechanics
LGA	Local Government Area
MFI	Microfinance Institution
NFI	Non-food Item
RUDA	Rural Development Agency
RUWASSA	Rural Water Supply and Sanitation Agency
RUWASTA	Rural Water Supply and Sanitation Agency
TCF	Tulsi Chanrai Foundation
TfD	Theater for Development
UNICEF	United Nations International Children's Emergency Fund
VHP	Volunteer Hygiene Promoters
VLOM	village level operation and maintenance
VSLA	Village Savings and Loan Association
WASH	Water, Sanitation, and Hygiene
WASHCOM	Water, Sanitation, and Hygiene Committees
WDC	Ward Development Committees
WES	Water environment and sanitation units
WSP	Water Supply Plan
WHO	World Health Organization

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