

## GOLD STANDARD PASSPORT

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## SECTION A. Project Title

Title: GS 2404 International Water Purification Programme - Chlorine Dispensers in Uganda CPA 9

Date: 26/11/2016

Version no.: 03

## SECTION B. Project description

Project start date: the 03/08/2014

The proposed small-scale CDM Programme Activity (hereafter “CPA”) is developed under the Small-Scale Programme of Activities (PoA) titled “International Water Purification Programme”. The CPA consists of the installation of chlorine dispensers in selected sub-counties in Mbale and Sironko districts (Uganda).

The International Water Purification Programme is a voluntary initiative undertaken by the coordinating/managing entity (CME), Pure Water Ltd., and the CPA is implemented on a voluntary basis by Evidence Action (CPA implementer). Pure Water Ltd. is a subsidiary 100% owned by South Pole Group. Evidence Action is a 501c3 non-profit organization registered in Washington, DC, USA.

### The burden of water-borne diseases

Globally, 760,000 children under five die each year from diarrheal diseases. Diarrhoeal disease is the second leading cause of death in children under five years old. It is both preventable and treatable.<sup>1</sup> Diarrheal diseases also lead to decreased food intake and nutrient absorption, malnutrition, reduced resistance to infection, and impaired physical growth and cognitive development. Diarrhoea’s serious impacts occur almost exclusively in the first five years of life, and it is recognized by the World Health Organization as a leading cause of child mortality as well as malnutrition.

The global context is reflected in Uganda, where this CPA will be implemented. Approximately 23,000 Ugandans, including 19,700 children under the age of five, die each year from diarrheal diseases – nearly 90% of which is directly attributed to poor water, sanitation and hygiene.<sup>2</sup> Only 10% of rural households in Uganda have access to piped water,<sup>3</sup> and even protected sources are rarely safe to drink or may become contaminated during transport or storage.

<sup>1</sup> World Health Organization (2013). Diarrhoeal Disease Fact Sheet. [online] at <http://www.who.int/mediacentre/factsheets/fs330/en/index.html>

<sup>2</sup> World Bank Water and Sanitation Program, March 2012. “Economic Impact of Poor Sanitation in Africa”, available at: <http://www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Uganda.pdf>

<sup>3</sup> Uganda Demographic and Health Survey, 2011. Available at: <http://www.measuredhs.com/pubs/pdf/FR264/FR264.pdf>

## Chlorine dispenser system

Treating water with chlorine at the source provides an effective, low cost and safe approach to improving water quality and reducing the impact of child diarrhea in Uganda. Chlorine kills 99.99% of harmful bacteria, keeps water free from contamination for up to 72 hours,<sup>4</sup> and reduces the incidence of diarrhea by approximately 40%.<sup>5</sup>

This CPA seeks to increase access to safe drinking water for rural communities, using a low greenhouse gas emitting water purification technology: chlorine dispensers. Chlorine dispensers are an innovative, low-cost approach proven to increase rates of treated household water and provide residual protection against recontamination. The chlorine dispenser system consists of the dispenser hardware, community education, and a regular supply of chlorine (see Figure 1). To use the dispenser, community members go to their water source, place their bucket or jerrican under the dispenser, turn the valve to dispense the correct amount of chlorine, and then fill the bucket as they normally would with water from the source. Evidence Action educates the community about the dangers of contaminated water and how to use the dispenser to treat their water. A community member is elected to be the dispenser ‘promoter’, who encourages use of the dispenser, reports any problems, and refills the dispenser with chlorine. Evidence Action provides on-going servicing of the dispensers such that communities have access to safe water over the long-term.



Figure 1: Chlorine dispenser system

<sup>4</sup> The exact length of residual protection will depend on the organic materials, metals and other compounds present in the water prior to disinfection as well as storage conditions discussed in Lantagne, D. 2008. “Sodium hypochlorite dosage for household and emergency water treatment.” *Journal of the American Water Works Association* 100, (8): 106-119.

<sup>5</sup> Clasen, Schmidt, Rabie, Roberts, Caincross. “Interventions to Improve Water Quality for Preventing Diarrhea: Systematic Review and Meta-Analysis.” <http://www.bmj.com/content/334/7597/782>

Operational procedure (same as in 'Chlorine Dispensers in Uganda – CPA 2, GS2735)

1. **Program area selection:** the installation areas have been selected due to their high prevalence of child mortality, high diarrhea rates, and very low coverage of treated piped water.
2. **Collaboration with officials:** the program begins with outreach to regional and district level officials, as well as to the Ministry of Health. Support from these officials is essential since they play an important role in creating public awareness about dispensers and chlorine, and in building trust with communities.
3. **Water source selection:** meetings are held with local officials to obtain a list of water points in the area. Site inspections are conducted to identify suitable water points for dispenser installation.
4. **Village community sensitization:** the project is introduced to end users, the water points selected for dispenser installation are communicated, and the community decides and votes on whether they want to have a dispenser installed.
5. **Dispenser installation:** dispenser installations are conducted by local artisans trained and managed by Evidence Action.
6. **Community education meeting:** community members learn about the dangers of contaminated drinking water, how to use the dispenser properly, and the local 'promoter' is elected by the community.
7. **Ongoing maintenance and refilling:** Evidence Action provides maintenance of the dispenser hardware, as well as chlorine refills to ensure that the dispenser is always available for use.

Hardware specifications

Dispenser casing	Injection-molded HDPE tank produced in Kenya
Dispenser tank	Blow-molded HDPE tank produced in Kenya; capacity 3 liters
Dispenser tank valve	Imported from USA; delivers a precise 3 ml dose of chlorine
Marine padlock	Imported from China
Asset tag	Imported from USA
Chlorine	Sodium hypochlorite solution, 11.90 minimum pH, 1.2% ± 0.1 available chlorine; imported from Kenya in 5 liter container with tamper-resistant cap
Hardware lifetime	5 years
Load factor	28'800 L per day <sup>6</sup>

<sup>6</sup> Assuming 30 seconds per dispensing over 12 hours per day

## Emission reductions

The majority of the communities in the CPA project area use traditional three stone stoves. The combustion of non-renewable biomass in these stoves emits a variety of gases, including carbon dioxide. Approximately 19,900 people die as a result of indoor air pollution in Uganda each year.<sup>7</sup> Wood fuel for cooking is often collected by women and children in rural Uganda. Studies have found that fuel collection takes an average of 2 hours per day in Uganda.<sup>8</sup> The dispensers program alleviates the drudgery of collecting fuel far from home, freeing up women's time for productive endeavors, education, and child care. With less time wasted on collecting wood and being ill, children will have more time to attend school, study, and enjoy childhood. By chlorinating drinking water at the dispenser, community members no longer have to boil water to make it safe to drink. The CPA thereby reduces the use of, and demand for non-renewable biomass that would have been used to boil water as a means of water purification in the absence of the project technology. This directly leads to reduced greenhouse gas emissions, as well as less kitchen smoke, improved indoor air quality and improved health, especially for women who do most of the cooking and water boiling in the home.

It is expected that the annual emission reductions will be 59,619 tCO<sub>2</sub> for 1,250 dispensers operating (with an expected functionality rate of 95%), thus meeting the small-scale eligibility criteria for Type III projects of a maximum of 60,000 tCO<sub>2</sub> emission reductions per year.

## Timetable

Date	Event
29 <sup>th</sup> July 2011	Validation start date of IWPP (PoA)
February 2012 – August 2012	50 pilot dispensers installed in Kibuku district (not included in IWPP).
February 2012 onwards	Regular supply of chlorine solution and replacements of chlorine dispensers as needed.
16 <sup>th</sup> November 2012	Registration of the PoA under the CDM of the UNFCCC.
9 <sup>th</sup> October 2013	Emission Reduction Purchase Agreement signed between Pure Water Ltd. (the CME) and Evidence Action (implementer).
7 <sup>th</sup> November 2013	Group Local Stakeholder Consultation conducted according to the requirements of the Gold Standard.
28 <sup>th</sup> May 2014	Registration of the PoA under the Gold Standard

<sup>7</sup> World Health Organisation, Geneva, 2007. "Indoor Air Pollution: National Burden of Disease Estimates". [http://www.who.int/indoorair/publications/indoor\\_air\\_national\\_burden\\_estimate\\_revised.pdf](http://www.who.int/indoorair/publications/indoor_air_national_burden_estimate_revised.pdf)

<sup>8</sup> World Health Organization, Indoor Air Pollution. <http://www.who.int/indoorair/publications/fuelforlife.pdf>

3 <sup>rd</sup> August 2014	Start date CPA 9. Installation of 1,209 chlorine dispensers in Sironko and selected sub-counties in Mbale districts in Eastern Uganda (August – November 2014). The unique barcode ID of the dispenser is 1016594.																
	<p>Installation of chlorine dispensers in CPA 9 is planned according to the following schedule:</p> <table border="1" data-bbox="643 445 1197 972"> <thead> <tr> <th data-bbox="643 445 888 566">Year</th> <th data-bbox="888 445 1197 566">No. of installed devices</th> </tr> </thead> <tbody> <tr> <td data-bbox="643 566 888 622">2016</td> <td data-bbox="888 566 1197 622">1,209</td> </tr> <tr> <td data-bbox="643 622 888 678">2017</td> <td data-bbox="888 622 1197 678">1,250</td> </tr> <tr> <td data-bbox="643 678 888 734">2018</td> <td data-bbox="888 678 1197 734">1,250</td> </tr> <tr> <td data-bbox="643 734 888 790">2019</td> <td data-bbox="888 734 1197 790">1,250</td> </tr> <tr> <td data-bbox="643 790 888 846">2020</td> <td data-bbox="888 790 1197 846">1,250</td> </tr> <tr> <td data-bbox="643 846 888 902">2021</td> <td data-bbox="888 846 1197 902">1,250</td> </tr> <tr> <td data-bbox="643 902 888 972">2022</td> <td data-bbox="888 902 1197 972">1,250</td> </tr> </tbody> </table>	Year	No. of installed devices	2016	1,209	2017	1,250	2018	1,250	2019	1,250	2020	1,250	2021	1,250	2022	1,250
Year	No. of installed devices																
2016	1,209																
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2022	1,250																






Contribution to sustainable development in Uganda


The proposed CPA will deliver a long-term, secure contribution to sustainable development in Uganda, which would not exist in the absence of carbon finance. The project activity's impact on sustainable development is assessed in section F of this document.

**SECTION C. Proof of project eligibility**

**C.1. Scale of the Project**

*Please tick where applicable:*

Project Type	Large	Small
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

	<input type="checkbox"/>
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**C.2. Host Country**

Uganda

### C.3. Project Type

[See Toolkit 1.2.c and Annex C]

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does your project activity classify as an End-use Energy Efficiency Improvement project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does your project activity classify as waste handling and disposal project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### Scale of Project:

The chlorine dispenser program in Uganda implemented by Evidence Action will include up to 20 CPAs under the International Water Purification Programme (PoA) and reduce/avert up to 1,200,000 tCO<sub>2</sub>e per year. Each CPA will be in line with the small-scale eligibility criteria for Type III projects of a maximum of 60,000 tCO<sub>2</sub> emission reductions per year, as defined by the UNFCCC.

#### Host Country:

Uganda has ratified the Kyoto protocol and is listed as a non-Annex I Country. Uganda does not have a cap on GHG emissions.

#### Type of Project:

The project activity classifies under the 'end-use energy efficiency' category. The Gold Standard Requirements define this category as the reduction in the amount of energy required for delivering or producing non-energy physical goods or services. Water treatment using chlorine is listed as a low greenhouse gas emitting technology in the CDM methodology AMS-III.AV (version 3) and hence directly reduces the required energy for water purification compared to boiling water. The households and communities with access to chlorine dispensers are clearly identified as end-users. The utilization of the chlorine dispensers requires physical intervention by the end-users, as demanded by the GS requirements for this category.

#### Greenhouse Gases:

The project activity reduces carbon dioxide emissions by reducing and averting the consumption of

non-renewable biomass or fossil fuels.

Official Development Assistance:

The project does not receive any ODA finance.

Project Timeframe:

The project activity has not been previously announced without mentioning its dependence on revenues from carbon credits.

The CPA start date is the 03/08/2014 when the first chlorine dispenser of CPA 9 was installed and thus after the local stakeholder consultation meeting. Hence the project activity classifies for the regular project cycle.

The crediting period for this CPA is chosen to be renewable. The CPA's first crediting period is from the date of inclusion of the CPA in the registered PoA (13 September 2016 – 12 September 2023), as per CPA-DD registered under the UNFCCC. The crediting period of this CPA-DD will not extend beyond the PoA duration (19 Nov 2012 - 18 Nov 2040).

Other Certification Schemes:

The CPAs will be included in the International Water Purification Programme (PoA, GS2404) and will not be registered under any other carbon certification schemes than the CDM and the Gold Standard.

Transfer of Credits Ownership:

In presence of all attendants a carbon right waiver is signed at the Community Education Meeting by the elected promoter and by the representative of the local village council (LC1) or a representative of the LC1. The LC1 forms the lowest administrative level in Uganda.

Pre Announcement	Yes	No
Was your project previously announced?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>The project activity has not been previously announced without mentioning its dependence on revenues from carbon credits. In Evidence Action's communication with e.g. USAID (who provided the required seed funding for the scaling-up process) carbon credits were mentioned from the very beginning as sustainable funding source for operation and maintenance of chlorine dispensers.</p>		

#### C.4. Greenhouse gas

Greenhouse Gas	
Carbon dioxide	<input checked="" type="checkbox"/>
Methane	<input type="checkbox"/>
Nitrous oxide	<input type="checkbox"/>

#### C.5. Project Registration Type

Project Registration Type	
Regular	<input checked="" type="checkbox"/>

Pre-feasibility assessment	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If Retroactive, please indicate Start Date of project activity: N/A

**SECTION D. Unique project identification**

**D.1. GPS-coordinates of project location**

	<b>Coordinates</b>
<b>Latitude</b>	N 0.9866° / N 1.2638°
<b>Longitude</b>	E 34.1146° / E 34.4270°

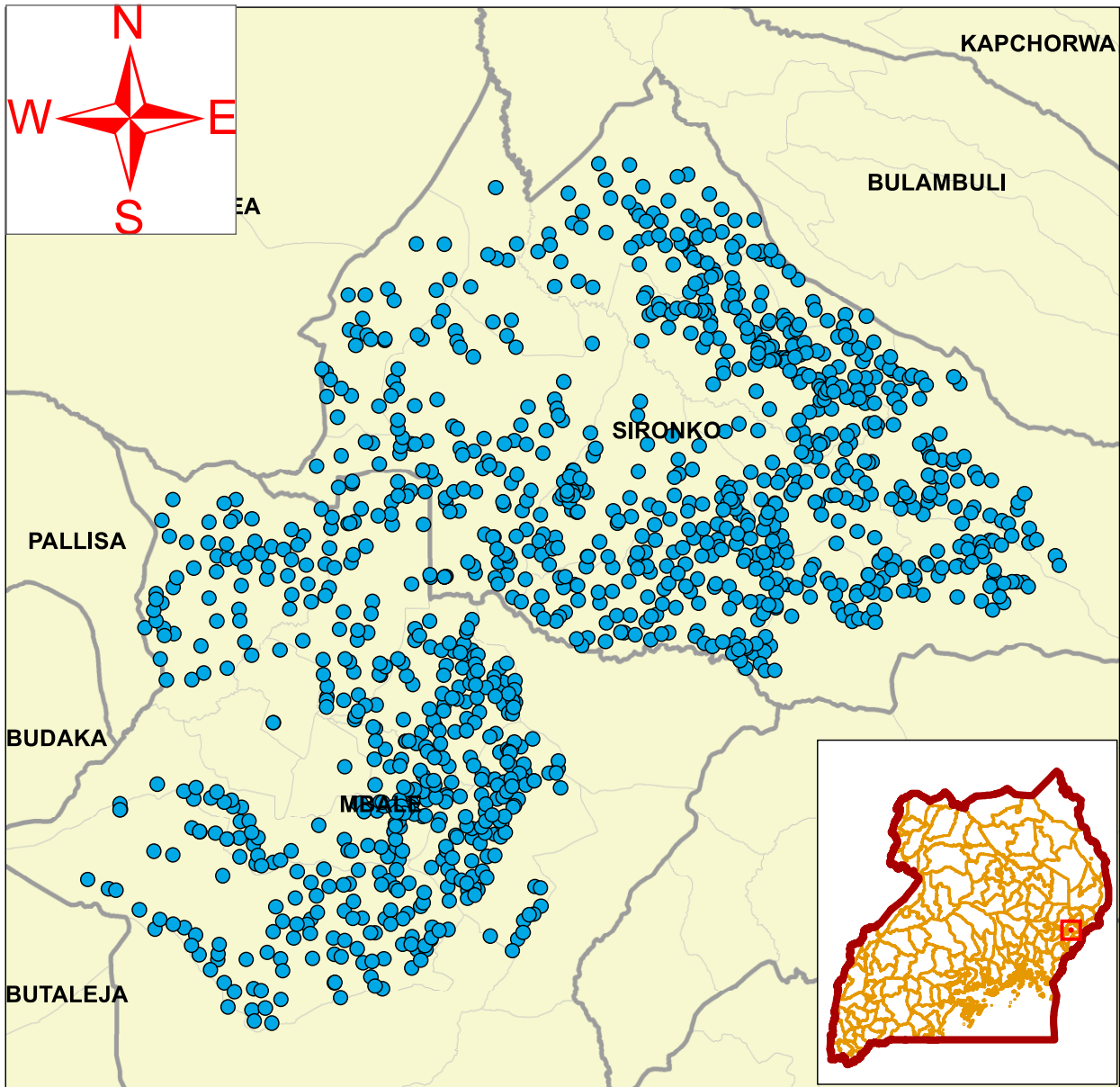
The physical boundary of the CPA is the communities who use the water points where dispensers are installed. A database containing the GPS coordinates and unique IDs for all included chlorine dispensers is available at the Evidence Action Uganda country office.

This CPA will take place in the Sironko District (Counties: Bungokho Nord and South) and Mbale District (Counties: Budadiri West and Budadiri East), Uganda. All the dispensers are located within the Longitude: E 34.1146° – 34.4270°, Latitude: N 0.9866° – 1.2638°

The map below shows the distribution of dispensers in the Sironko District and Mbale District, Uganda.

D.2. Map

### CPA 9 Dispensers Area



## SECTION E. Outcome stakeholder consultation process

### E.1. Assessment of stakeholder comments

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Faster and further expansion of the project.	Yes	Evidence Action is currently expanding its operations in Eastern Uganda and will start piloting the dispensers in Western Uganda in early 2014. By end of 2018 more than 30,000 dispensers are expected to be installed in Uganda.
Promoters want to be hired as field staff.	Yes	Evidence Action always publically advertises open positions. In the transparent hiring process promoters with the required qualifications have the same chances to get the job as all other applicants.
The project is based on a lot of voluntarism from community side.	Yes	Community management (unpaid) of water points is very common in rural Uganda and often an important factor for ensuring sustainability. Nevertheless, Evidence Action is currently testing different models for increasing promoters' motivation in Kenya. In case regular salaries are shown to increase the consumption of chlorine-treated water, payments may be introduced in future.
No income generating activity is attached to this project.	Yes	The project does not include a direct income generating part for the target communities. Nevertheless, chlorine dispensers will reduce the burden of disease and increase the number of productive working days. The saved time can be used for income generating activities.
Why does the community waive all rights of carbon credits?	Yes	<p>Legal ownership of the installed chlorine dispenser hardware lies with Evidence Action. Community buy-in is achieved through an initial vote of whether they would like a chlorine dispenser, as well as through their voluntary provision of sand and ballast for the hardware installation. In exchange for having free access to the dispenser, the community (as represented by the dispenser promoter or village elder) signs the rights for the emissions reductions generated by the dispenser over to Evidence Action.</p> <p>In addition, it is technically and financially impossible for individual households or communities to claim carbon credits for their chlorine dispensers. The carbon revenue will directly benefit the end users by operating and maintaining the chlorine dispensers free of charge.</p>

<p>There is not enough data to effectively conclude the achievements.</p>	<p>Yes</p>	<p>Evidence Action is keen to measure the impact of the chlorine dispenser program and puts extensive effort into monitoring activities compared with many other implementers of water projects. Experiences from Kenya (a dataset of almost four years) show that adoption rates are around 43%. Evidence Action will continue to collect all data necessary to improve its activities and achieve sustainable health gains in the project areas.</p>
<p>Risk of undermining efforts to improve access to sound water supply infrastructure.</p>	<p>Yes</p>	<p>The chlorine dispenser technology can be equally effective next to improved and unimproved water sources. Evidence Action continues to encourage governments, businesses, and NGOs to improve water supply infrastructure, but recognizes that a desire for improved infrastructure in the future does not mean that households with no other choice in the present should not have an opportunity for access to safe water when it can be provided at a low cost.</p>
<p>Risk of project being counter-productive to promoting hygiene at household level.</p>	<p>Yes</p>	<p>The chlorine dispenser system is not an alternative to other hygiene promotion activities at a household level, but it is used to supplement them. Evidence Action supports hygiene promotion efforts and does not interfere with them. Additionally, Evidence Action coordinates with village health teams on their efforts, which include health/hygiene promotion. Chlorination is very effective in this context because it provides protection from recontamination during transport or storage for up to 72 hours.</p>
<p>Doubts regarding sustainability because a single promoter instead of a water user committee is responsible for the operation and maintenance.</p>	<p>Yes</p>	<p>Evidence Action actively works with the Water User Committees (WUCs) and the Village Health Teams (VHTs). They are invited to all meetings and are encouraged to promote and become engaged with the chlorine dispenser system. This is really important for the program as they are responsible of the water source (in the case of the WUCs) and for health promotion (in the case of the VHTs).</p> <p>The program asks the community to elect a promoter; and an assistant promoter to support the promoter's promotion and maintenance efforts. Regular phone calls and visits to the water source ensure sustained communication and enable the replacement of the promoter if they are ever unable to effectively perform their duties. Water User Committees are not disbanded upon promotion of the dispenser. The promoter does not replace the WUC but is an additive component of attention to water safety within the community.</p>

<p>Doubts of sustainability due to costs and supply chain.</p>	<p>Yes</p>	<p>Dispenser access is free to users. Evidence Action does not solely rely on donations or grant funding to cover the costs of service delivery. Instead, Evidence Action works with experts to develop, monitor, audit, issue and sell dispenser carbon credits. The revenues earned from carbon sales are used to reinvest in the program, ensuring that dispensers are sustainable over the long term, including chlorine delivery (free of charge) to the promoters for regular refills of the dispensers. The promoter reports any damages on the dispenser back to Evidence Action so that the dispenser can be replaced.</p>
<p>In rural and urban water supply people hardly boil water for drinking.</p>	<p>Yes</p>	<p>According to the Uganda DHS in 2011, boiling is a fairly common practice in rural and urban Uganda.</p> <p>The survey report shows that 37.7% of rural households in Uganda boil their drinking water; and 3.6% use other adequate household water treatment technologies. If end users had the required hygiene knowledge and the financial means to treat their water, it is assumed that most households would chose boiling for purifying their drinking water as this is the most common treatment option. In urban Uganda 70.6% of the households boil their drinking water according to the DHS.</p>
<p>Difficulty of measuring the project-related emission reductions.</p>	<p>Yes</p>	<p>The project-related emission reductions and avoidance are monitored and quantified based on a methodology registered with the UNFCCC under the Clean Development Mechanism (AMS-III.AV Version 03).</p>

## E.2. Stakeholder Feedback Round

Please describe report how the feedback round was organized, what the outcomes were and how you followed up on the feedback.

All relevant documents (LSC report, CPA-DD and GS Passport) were made publically available at:

- South Pole website  
<http://www.thesouthpolegroup.com/gold-standard-and-other-stakeholder-consultations>
- Markit website  
[https://mer.markit.com/br-reg/public/master-project.jsp?project\\_id=103000000000547](https://mer.markit.com/br-reg/public/master-project.jsp?project_id=103000000000547)
- Evidence Action Country Office, Regency Plaza, Plot 30 Lugogo Bypass, 3rd Floor, Room 4, Kampala, Uganda (hardcopies)
- Evidence Action Mbale Office, Plot 08, Mundaye Close, Mbale (hardcopies)
- Mbale District, District Water Office (hardcopies)
- Sironko District, District Water Office (hardcopies)

On July 20<sup>th</sup>, 2016 an email was sent to all stakeholders that were invited and/or attended the physical LSC meeting in Kampala on November 7<sup>th</sup>, 2013.

Deadline for submitting comments was September 22<sup>nd</sup>, 2016.

### Lars Osterwalder

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**From:** Lars Osterwalder <l.osterwalder@thesouthpolegroup.com>  
**Sent:** 20 July 2016 08:37  
**To:** 'Lars Osterwalder'  
**Cc:** info@goldstandard.org; 'Tanushree Bagh'; Andrew Ocama; Hua Jin  
**Subject:** Stakeholder Feedback Round for GS5051 and GS5052

[Stakeholder Feedback Round for GS5051 - "GS2404 International Water Purification PoA Chlorine Dispensers in Uganda CPA 9"](#)

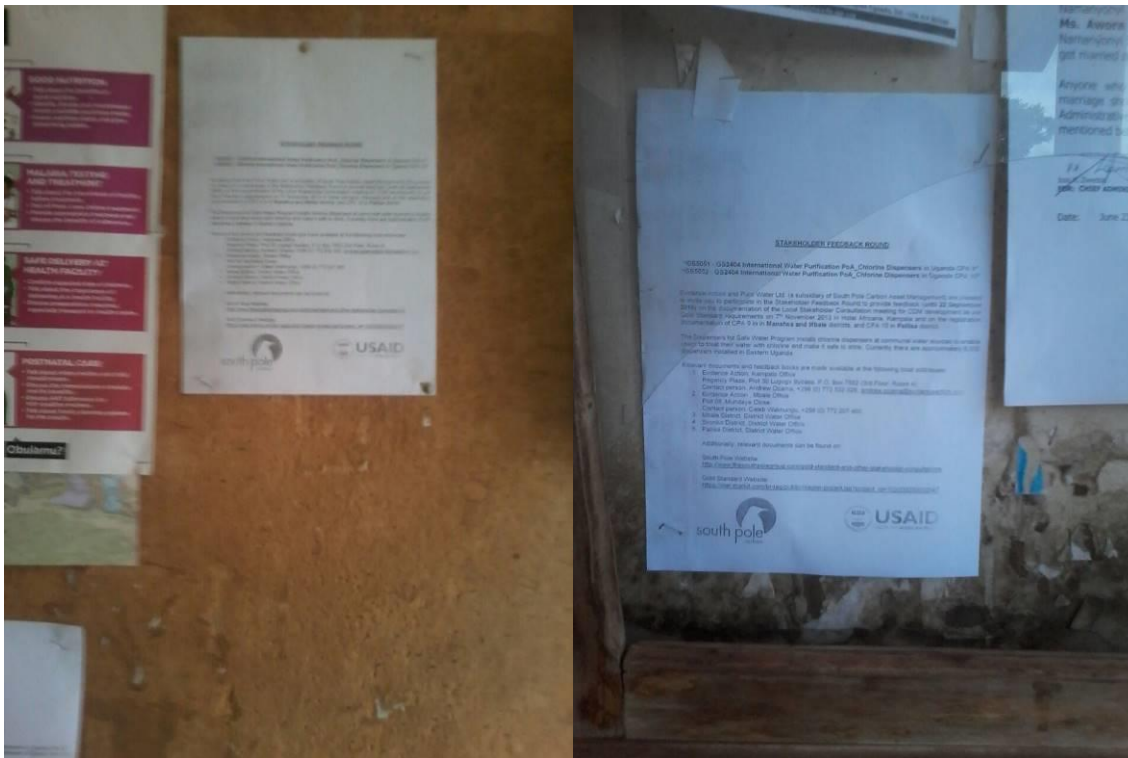
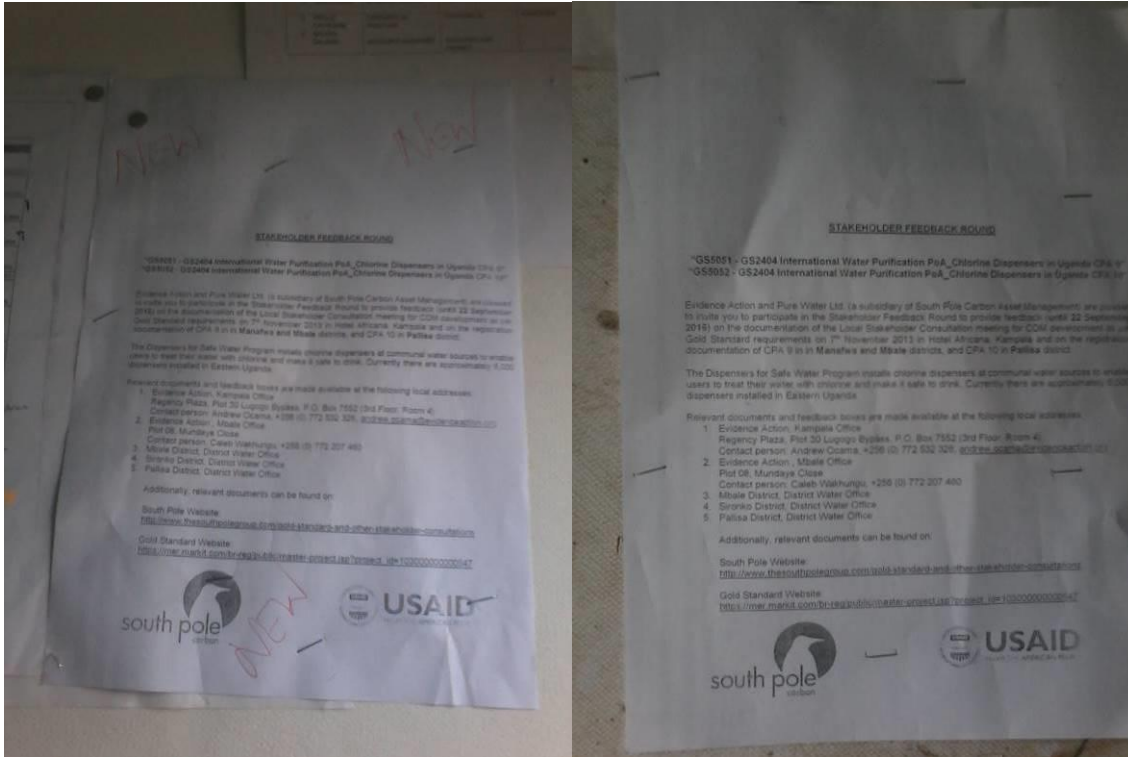
and

[Stakeholder Feedback Round for GS5052 - "GS2404 International Water Purification PoA Chlorine Dispensers in Uganda CPA 10"](#)

Dear Stakeholders,

Evidence Action and Pure Water Ltd. (a subsidiary of South Pole Carbon Asset Management) are pleased to invite you to participate in the Stakeholder Feedback Round to provide feedback on the documentation of the Local Stakeholder

An invitation letter was delivered by Evidence Action field staff to relevant government officers in Mbale and Sironko districts and the general public was informed about the Stakeholder Feedback Round with posters placed in key locations in Mbale and Manafwa districts, including the local government offices and other central locations.

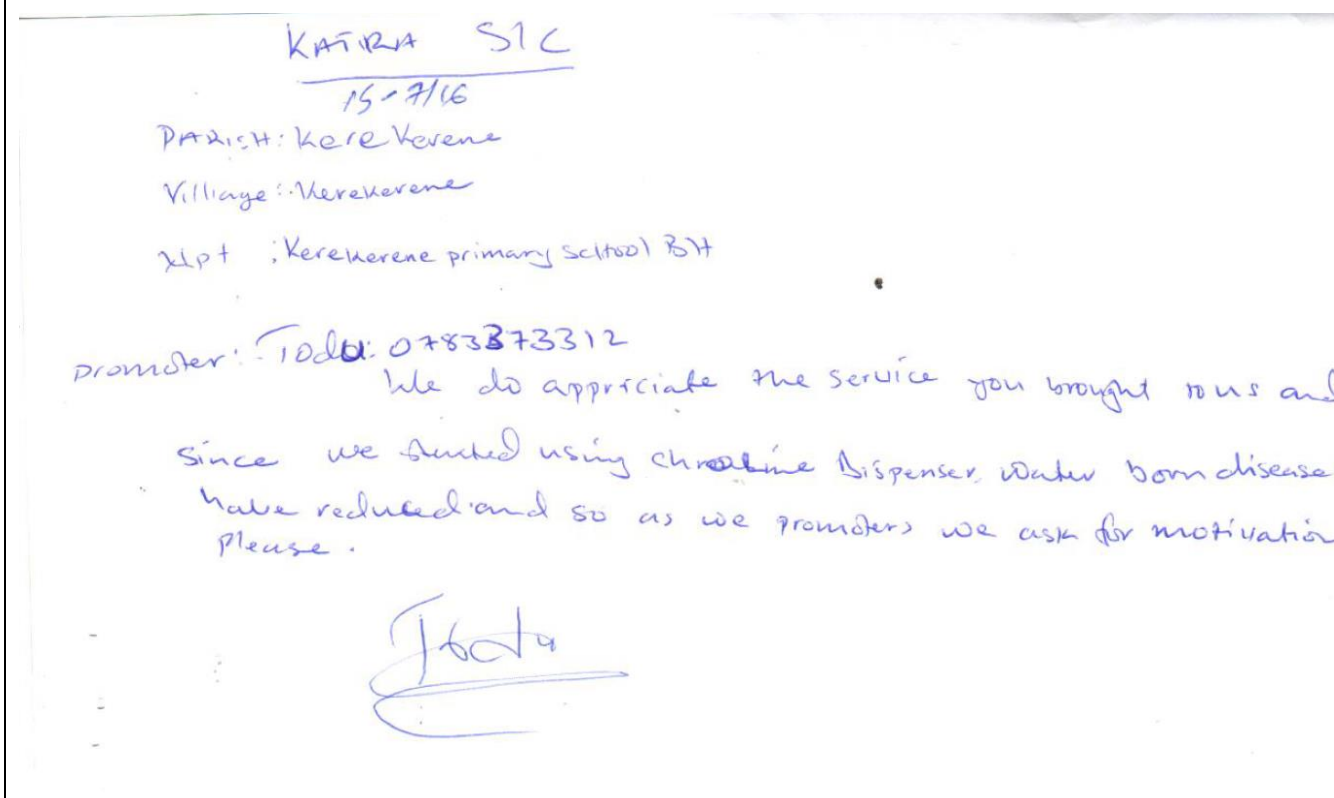


Photos of posters placed in Mbale and Sironko district

During the period of the SFR five written comments from promoters were received at the Evidence Action office in Mbale. The comments were generally positive, expressed the appreciation of the communities to have a chlorine dispenser installed and confirmed the impact on reducing water-borne diseases.

<b>Stakeholder &amp; stakeholder comment</b>	<b>Was comment taken into account (Yes/ No)?</b>	<b>Explanation (Why? How?)</b>
<p>Mushirara Sharif (077 579 90 40)</p> <p>He was very happy and was thanking the organization for giving them chlorine that has helped them to minimize diseases.</p>	Yes	No corrective action required.
<p>Kisyuni Nake Marrium</p> <p>They thank the organization for the chlorine.</p>	Yes	No corrective action required.
<p>Mr. Nambuya</p> <p>We appreciate the service you give us but as promoters we need some motivation because we are doing a lot to serve the community.</p>	Yes	<p>As part of the current system, the promoters are elected by the community, and receive a T-shirt and some airtime for the communication with Evidence Action. Most promoters are satisfied with the current system and feel proud to be elected for voluntarily supporting their community. As chlorine and dispenser maintenance is provided for free to the community, Evidence Action expects the community to contribute in form of appointing a promoter and a deputy promoter for regular chlorine refills. Such community contributions are important to ensure project ownership by beneficiaries (which increases projects' sustainability) and hence Evidence Action will not introduce additional incentives to the promoters at this time.</p>
<p>Ssenguba Aisha (078 3665 53 44)</p> <p>The promoter is happy with the program. She says that it has led to the reduction of water borne diseases.</p>	Yes	No corrective action required.

<p>Mr. Todu (078 337 33 12)</p> <p>We do appreciate the service you brought to us and since we still using chlorine dispensers water borne diseases have reduced. So as we promoters we ask for motivation please.</p>	<p>As part of the current system, the promoters are elected by the community, and receive a T-shirt and some airtime for the communication with Evidence Action. Most promoters are satisfied with the current system and feel proud to be elected for voluntarily supporting their community. As chlorine and dispenser maintenance is provided for free to the community, Evidence Action expects the community to contribute in form of appointing a promoter and a deputy promoter for regular chlorine refills. Such community contributions are important to ensure project ownership by beneficiaries (which increases projects' sustainability) and hence Evidence Action will not introduce additional incentives to the promoters at this time.</p>
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Example of feedback letter received at Evidence Action's office in Mbale

**E. 3. Discussion on continuous input / grievance mechanism**

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	Justification
Continuous Input / Grievance Expression Process Book	<p><u>Country office:</u> 3rd Floor Office 4 Regency plaza, plot 30, Lugogo Bypass, Kampala</p> <p><u>Mbale field office:</u> Plot 08, Mundaye Close, Mbale</p>	<p>Inputs or grievances can be given at any time directly to Evidence Action staff who are regularly visiting water points for evaluations, hardware check and chlorine delivery. During these visits, they interact with the promoters and can receive input and relay it to the country office.</p> <p>Boxes for written comments can be found in the Evidence Action country and field offices.</p>
Telephone access	<p><u>Evidence Action:</u> 039 217 75 03</p> <p><u>CME:</u> +41 43 501 35 50</p>	<p>Each promoter gets a laminated promoter card with the number as well as some airtime to help them call the number.</p> <p>Evidence Action engages office based staff to complete phone calls to promoters on a regular basis because some promoters may be reluctant to call to report problems.</p>
Internet/email access	<p><u>Evidence Action:</u> <a href="mailto:andrew.ocama@evidenceaction.org">andrew.ocama@evidenceaction.org</a></p> <p><u>CME:</u> Pure Water Ltd. <a href="mailto:iwpp@southpolecarbon.com">iwpp@southpolecarbon.com</a></p> <p><u>Gold Standard:</u> <a href="mailto:info@goldstandard.org">info@goldstandard.org</a></p>	<p>Inputs or grievances can be sent at any time to the Evidence Action Uganda country office in Kampala or via email to the Program Manager.</p> <p>Contact details of CME and Gold are made available at the Evidence Action offices in Uganda.</p>
Nominated Independent Mediator (optional)	N/A	<p>Taking into account the geographical dispersion of the chlorine dispensers, the selection of a Nominated Independent Mediator was not considered as an appropriate method for continuous input and grievance expression.</p>

All issues identified during the crediting period through any of the Methods shall have a mitigation measure in place. The identified issue should be discussed in the revised Passport and the corresponding mitigation measure should be added to sustainability monitoring plan in section G.

## SECTION F. Outcome Sustainability assessment

### F.1. 'Do no harm' Assessment

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low, medium, high)	Mitigation measure
1 The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in human rights abuses.	<p>Uganda ratified the International Covenant on Civil and Political Rights in 1995<sup>9</sup> and the African Charter on Human and Peoples' Rights in 1986<sup>10</sup>. Additionally, fundamental and other human rights and freedoms are recognized by the constitution of Uganda<sup>11</sup>.</p> <p>By introducing a low carbon water purification technology, the project respects and protects human rights including dignity, cultural property and uniqueness of indigenous people. Chlorine dispensers provide access to safe water to everybody in a community without exclusion. The project is not</p>	Low	N/A

<sup>9</sup> [http://treaties.un.org/pages/viewdetails.aspx?src=treaty&mtdsg\\_no=iv-4&chapter=4&lang=en](http://treaties.un.org/pages/viewdetails.aspx?src=treaty&mtdsg_no=iv-4&chapter=4&lang=en)

<sup>10</sup> <http://www.achpr.org/instruments/achpr/ratification/>

<sup>11</sup> Constitution Of The Republic Of Uganda, 1995

	complicit in any form of human rights abuses.		
2 The project does not involve and is not complicit in involuntary resettlement.	Chlorine dispensers do not seize significant space and are only installed with the land owners' consent. The project will not result in any temporal or permanent resettlements.	Low	N/A
3 The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.	Uganda signed the Cultural Charter For Africa in 1986 <sup>12</sup> .  The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage. The only practice that is altered is the replacement of boiling water as a means of water purification, which is not considered as a cultural practice.	Low	N/A
4 The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights.	Uganda has ratified the ILO Conventions 87 (Freedom of Association and Protection of the Right to Organise Convention, 1947) in 2005 and 98 (Right to Organise and Collective Bargaining Convention 1949) in 1963 <sup>13</sup> . Additionally, Uganda has its own legislation concerning labour association and disputes <sup>14</sup> .  Project implementation will require the employment of local staff for the installation and maintenance of chlorine	Low	N/A

<sup>12</sup> <http://www.au.int/en/sites/default/files/Cultural%20Charter%20for%20Africa.pdf>

<sup>13</sup> [http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200\\_COUNTRY\\_ID:103324](http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103324)

<sup>14</sup> The Labour Unions Act 2006 and the Labour Dispute (Arbitration and Settlement) Act 2006

	<p>dispensers, training, as well as for the monitoring of the project activity. All people employed by the project participants will be subject to the mentioned conventions as well as the freedoms and rights provided by the legislation of Uganda.</p> <p>The employees' freedom of association and their right to collective bargaining will be fully respected. The project is not complicit in restrictions of these freedoms and rights.</p>		
5 The project does not involve and is not complicit in any form of forced or compulsory labour.	<p>Uganda has ratified the ILO Conventions 29 (Forced Labour Convention, 1930) in 1963 and 105 (Abolition of Forced Labour Convention, 1957) in 1963<sup>15</sup>. Additionally, Uganda has its own legislation concerning employment<sup>16</sup>.</p> <p>The participation in the project as well as employment by the project participants will be voluntary. The project will not involve or be complicit in forced or compulsory labour.</p>	Low	N/A
6 The project does not employ and is not complicit in any form of child labour.	<p>Uganda has ratified the ILO Conventions 138 (Minimum Age Convention) in 2003 and 182 (Worst Forms of Child Labour Convention) in 1999<sup>17</sup>. Additionally,</p>	Low	N/A

<sup>15</sup> [http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200\\_COUNTRY\\_ID:103324](http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103324)

<sup>16</sup> The Employment Act, 2006

<sup>17</sup> [http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200\\_COUNTRY\\_ID:103324](http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103324)

	<p>Uganda has its own legislation concerning child labour<sup>18</sup>. The legislation states, that no employment is allowed under 14 years and no hazardous work under 18 years.</p> <p>No child labour is employed for any project-related work. The project is not complicit in any form of child labour.</p>		
<p>7 The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.</p>	<p>Uganda has ratified the ILO Conventions 100 (Equal Remuneration Convention, 1951) and 111 (Discrimination, Employment and Occupation) Convention, 1958) in 2005<sup>19</sup>.</p> <p>Neither end user of the chlorine dispenser nor any employees will be subjected to any form discrimination based on gender, race, religion, sexual orientation or any other basis by the project participants.</p>	Low	N/A
<p>8 The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments.</p>	<p>Uganda has its own legislation in place concerning occupational safety and health<sup>20</sup>.</p> <p>The installation, maintenance and monitoring of chlorine dispensers, as well as the training activities do not involve any hazardous work or the exposure to hazardous substances and</p>	Low	N/A

<sup>18</sup> The Employment Act, 2006

<sup>19</sup> [http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200\\_COUNTRY\\_ID:103324](http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103324)

<sup>20</sup> Occupational Safety and Health Act 2007

	<p>processes. All work involved in the project is performed under safe labour conditions. The concentration of the chlorine solution is lower than in commercially available bleach and needs therefore not to be considered as a hazardous substance.</p> <p>The project is not complicit in exposing workers to unsafe or unhealthy work environments.</p>		
<p>9 The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle. This principle can be defined as: “When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.”</p>	<p>Uganda signed the African Convention on the Conservation of Nature and Natural Resources in 1977<sup>21</sup>. Additionally Uganda has its own legislation in place concerning environmental protection<sup>22</sup>.</p> <p>The project does not involve any agricultural activity, production of hazardous chemicals or waste. The project will have a beneficial effect on the environment, as the consumption of non-renewable biomass will be reduced.</p>	Low	N/A
<p>10 The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c)</p>	<p>Uganda has its own legislation in place concerning conservation of natural habitats<sup>23</sup>.</p> <p>The project will not be involved in significant conversion or degradation</p>	Low	N/A

<sup>21</sup> [http://www.au.int/en/sites/default/files/Nature%20and%20Natural%20Resources\\_0.pdf](http://www.au.int/en/sites/default/files/Nature%20and%20Natural%20Resources_0.pdf)

<sup>22</sup> The National Environment Act 1998 and the Water Act 1997

<sup>23</sup> The Uganda Wildlife Act 1996 and the National Forestry And Tree Planting Act, 2003

identified by authoritative sources for their high conservation value or (d) recognized as protected by traditional local communities.	of any natural habitats. The project protects natural habitats by reducing the consumption of non-renewable biomass.  The project is not complicit in practices contrary to the precautionary principle.		
11 The project does not involve and is not complicit in corruption.	Uganda ratified the UN Convention Against Corruption in 2004 <sup>24</sup> . Uganda did not ratify the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions <sup>25</sup> .  Evidence Action as the project implementer is externally audited annually.  The project is not involved or complicit in any form of corruption and does not include activities that are prone to corruption.	Low	N/A

## F.2. Sustainable Development matrix

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Gold Standard indicators of sustainable development	If relevant, copy mitigation measure from 'Do No Harm' assessment, and include	Check <a href="http://www.undp.org/mdg">www.undp.org/mdg</a> and <a href="http://www.mdgmonitor.org">www.mdgmonitor.org</a>  Describe how your indicator is related to	Defined by project developer	<u>Negative impact:</u> score '-' in case negative impact is not fully mitigated,

<sup>24</sup> [http://treaties.un.org/Pages/ViewDetails.aspx?mtdsg\\_no=XVIII-14&chapter=18&lang=en](http://treaties.un.org/Pages/ViewDetails.aspx?mtdsg_no=XVIII-14&chapter=18&lang=en)

<sup>25</sup> <http://www.oecd.org/daf/anti-bribery/WGBRatificationStatus.pdf>

	mitigation measure used to neutralise a score of '-'	local MDG goals		score '0' in case impact is planned to be fully mitigated  <u>No change in impact:</u> score '0'  <u>Positive impact:</u> score '+'
Air quality	N/A	<u>MDG 4 and 5:</u>  The use of chlorine dispensers reduces the amount of biomass and fossil fuel burnt for water purification and hence leads to reduced smoke emission. This will reduce the exposition of mothers and children to hazardous air pollutants.	<u>Parameter:</u>  PM10 concentration in the indoor air  As the impacts of chlorine dispensers on air quality are difficult to measure, the parameter was scored neutral, following the principle of conservativeness.	0
Water quality and quantity	N/A	<u>MDG 4 and 5:</u>  Water treated with chlorine is safe for drinking and helps reducing waterborne diseases, for which mothers and children are especially vulnerable.  <u>MDG Goal 7:</u>  The installation of chlorine dispensers will increase the access of people to	<u>Parameter:</u>  Fraction of water samples from chlorine dispenser users that meet a quality threshold of < 10 CFU/100 ml for <i>E.coli</i> .	+

		safe water.		
Soil condition	N/A	<p><u>MDG Goal 7:</u></p> <p>Reduced deforestation by decreasing consumption of non-renewable biomass will lead to reduced soil erosion.</p>	<p><u>Parameter:</u></p> <p>Level of soil erosion.</p> <p>As the impacts of chlorine dispensers on deforestation and soil erosion are indirect and difficult to measure, the parameter was scored neutral, following the principle of conservativeness.</p>	0
Other pollutants	N/A	<p><u>MDG Goal 7:</u></p> <p>Environmental sustainability is ensured as the project activities do not emit a significant amount of pollutants.</p>	<p><u>Parameter:</u></p> <p>Amount of solid waste (empty chlorine 5 liter containers/refills) generated</p> <p>The project activity does not result in the emission of significant amount of hazardous substances, light, noise or other pollutants.</p> <p>The few empty chlorine containers are not discarded by promoters into the surrounding environment, since they can be used for a variety of different</p>	0

			<p>purposes such as water collection containers.</p> <p>This indicator was scored neutral.</p>	
Biodiversity	N/A	<p><u>MDG Goal 7:</u></p> <p>Reducing deforestation by decreasing the consumption of non-renewable biomass will help to preserve the biodiversity in local woodlands.</p>	<p><u>Parameter:</u></p> <p>Number of affected plants and animals.</p> <p>As the impact of chlorine dispensers on plants and animals through deforestation are indirect and difficult to measure, the parameter was scored neutral, following the principle of conservativeness.</p>	0
Quality of employment	N/A	<p><u>MDG Goal 1:</u></p> <p>The project activity will create job opportunities with safe working conditions and learning opportunities.</p>	<p><u>Parameter:</u></p> <p>Number of work-related trainings attended by Evidence Action staff.</p> <p>As the quality of employment is difficult to measure, the parameter was scored neutral following the principle of conservativeness</p>	0
Livelihood of the poor	N/A	<p><u>MDG Goal 1:</u></p> <p>The chlorine dispensers will reduce</p>	<p><u>Parameter:</u></p> <p>Number of people treating their</p>	+

		<p>the prevalence of diarrhea and therefore reduce time and money spent on hospital visits, and the number of unproductive days.</p> <p>It will also reduce the demand for fuel and hence save time and money spent to collect firewood or to purchase firewood and fossil fuels and hence contribute to poverty alleviation.</p>	drinking water with chlorine.	
Access to affordable and clean energy services	N/A	<p><u>MDG Goal 7:</u></p> <p>The reduced demand for firewood will contribute to ensuring environmental sustainability.</p>	<p><u>Parameter:</u></p> <p>Percentage of total energy consumption covered through firewood or charcoal.</p> <p>The project will reduce the demand of fuel and firewood of project beneficiaries. However it will not have an impact on price and availability of energy. The parameter was hence scored neutral.</p>	0
Human and institutional capacity	N/A	<p><u>MDG Goal 4/5:</u></p> <p>As integral part of the chlorine dispenser installation the end users will be trained in correct dispenser</p>	<p><u>Parameter:</u></p> <p>Number of end users attending community education</p>	+

		usage and will be made aware of the relation between unsafe drinking water, bad hygiene and diarrheal diseases.  Better awareness will contribute to reduced child mortality and improved maternal health.	meetings	
Quantitative employment and income generation	N/A	<u>MDG Goal 1:</u>  The project will create job opportunities that will contribute to the aim of full productive employment.	<u>Parameter:</u>  Number of Evidence Action employees and contractors in Uganda.	+
Balance of payments and investment	N/A	<u>MDG Goal 8:</u>  Balanced payments and investments are a constituent of a global partnership for development.  The dispenser program is attractive for social investors who accept carbon certificates in return for their investment.  Some materials are produced abroad and need to be imported to Uganda.	<u>Parameter:</u>  Amount of foreign direct investment.  Overall it is expected that the program will have a positive balance of payments and investment. However, the total amount is insignificant and difficult to measure. Thus, the parameter was scored neutral, following the principle of conservativeness.	0
Technology transfer and technological self-reliance	N/A	<u>MDG Goal 8:</u>  Technology transfer is an integral constituent of a global partnership for	<u>Parameter:</u>  Number of chlorine dispensers installed in Uganda by other	0

		<p>development.</p> <p>The project will transfer a novel and innovative water purification technology to Uganda and end users in use and maintenance. The knowledge will also be transferred to interested partners.</p>	<p>organizations than Evidence Action.</p> <p>As it is difficult to keep track of the activities of other organizations, the parameter was scored neutral following the principle of conservativeness.</p>	
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**Justification choices, data source and provision of references**

A justification paragraph and reference source is required for each indicator, regardless of score:

<p>Air quality</p>	<p><u>Neutral Score</u></p> <p>The baseline survey for CPA 2 revealed that 97.5% of the surveyed households use firewood to boil water and 93.0% of the households use conventional, unimproved cook stoves<sup>26</sup>.</p> <p>Cooking and heating with solid fuels on open fires and traditional cook stoves results in high levels of indoor air pollution, emitting a broad range of hazardous pollutants, among them small soot particles that penetrate deep into the lungs<sup>27</sup>.</p> <p>The resulting exposure to hazardous air pollution has severe impact on health, as increased risk of acute respiratory infections (ALRI), chronic obstructive pulmonary disease (COPD), lung cancer and other diseases. Women and children in low and least developed countries are disproportionately affected.<sup>28</sup></p> <p>The chlorine dispenser program will reduce the amount of firewood burnt compared to the baseline situation. Hence the project activity will reduce the exposure of project beneficiaries to hazardous air pollutants. As the impacts of chlorine dispensers on air quality are difficult to measure, the parameter was scored neutral, following the principle of conservativeness.</p>
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<sup>26</sup> Pure Water Ltd, 2014: CDM-SSC-CPA-DD: Chlorine Dispensers in Uganda - CPA 2.

<sup>27</sup> WHO 2011: Fact sheet N°292: Indoor air pollution and health.

<sup>28</sup> WHO, 2002: The health effects of indoor air pollution exposure in developing countries.

<p>Water quality and quantity</p>	<p><u>Positive Score</u></p> <p>Improving access to safe drinking water makes an important contribution to improved health outcomes. Diarrhoea remains one of the leading global causes of death among children under 5. Approximately 23,000 Ugandans, including 19,700 children under the age of five, die each year from diarrheal diseases – nearly 90% of which is directly attributed to poor water, sanitation and hygiene.<sup>29</sup></p> <p>Extensive research shows that chlorination is an effective technology for treating drinking water.<sup>30</sup> Hence the project activities will improve water quality, supply the end users with safe drinking water, and likely reduce the incidence of diarrhoea.</p>
<p>Soil condition</p>	<p><u>Neutral Score</u></p> <p>The area of Uganda’s forests is steadily declining. Between 1990 and 2005 the total area of woodlands decreased by 29%.<sup>31</sup> Removal of fuel wood is one of the main drivers of deforestation and forest degradation in Africa. <sup>32</sup> Especially in Africa, deforestation causes severe soil erosion and degradation.<sup>33</sup> Hence the reduced consumption of firewood with the installation of chlorine dispensers is likely to have a beneficial impact on soil conditions. However the effects are indirect and thus difficult to measure and accurately attribute. Following the principle of conservativeness, the indicator was scored neutral.</p>
<p>Other pollutants</p>	<p><u>Neutral Score</u></p> <p>The chlorine dispensers do not contain or produce any significant amount of hazardous substances or other pollutants.<sup>34</sup> The project activity does not result in any light or noise emissions or any visual pollution and therefore the indicator was scored neutral.</p>
<p>Biodiversity</p>	<p><u>Neutral Score</u></p> <p>As mentioned above, the deforestation rate is high in Uganda.<sup>31</sup> Removal of fuel wood is one of the main drivers of deforestation and forest degradation in Africa.<sup>32</sup> The high global rate of deforestation and forest degradation as well as the decline in</p>

<sup>29</sup> World Bank Water and Sanitation Program, March 2012. “Economic Impact of Poor Sanitation in Africa”, available at: [www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Uganda.pdf](http://www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Uganda.pdf)

<sup>30</sup> WHO, 2011: Guidelines for Drinking-water Quality. Fourth Edition

<sup>31</sup> Uganda Bureau of Statistics, 2012: 2012 Statistical Abstract.

<sup>32</sup> Kissinger, G., M. Herold, V. De Sy, 2012: Drivers of Deforestation and Forest Degradation: A Synthesis Report for REDD+ Policymakers.

<sup>33</sup> FAO, 2012: Land and environmental degradation and desertification in Africa, FAO, 1995. State of the World’s Forests

<sup>34</sup> Evidence Action, 2013: <http://evidenceaction.org/dispensers/>

	<p>primary forest area are severe threats for the world's forest biodiversity<sup>35</sup>. Hence the reduced consumption of firewood with chlorine dispensers is likely to have a beneficial impact on biodiversity. However, the effects are indirect and thus difficult thus measure and attribute. Following the principle of conservativeness, the indicator was scored neutral.</p>
Quality of employment	<p><u>Neutral Score</u></p> <p>Evidence Action through its dispensers program creates long-term job opportunities. For operation and maintenance of every 1,000 dispensers, 1 Field Associate and 4 Community Service Assistants are employed. The work contracts are in line with Ugandan law and the financial compensation is fair.<sup>36</sup> For each CPA around 6 to 7 long-term job opportunities are created. As the quality of employment is difficult to measure, the parameter was scored neutral following the principle of conservativeness</p>
Livelihood of the poor	<p><u>Positive Score</u></p> <p>In rural Uganda, almost 30% of the population lives below the national poverty line.<sup>31</sup> Chlorine dispensers will reduce the burden of disease and increase the number of productive working days. This will contribute to poverty alleviation, as the saved time can be used for the improvement of the living conditions of the project beneficiaries (e.g. health services, income generation, education). In Sub-Saharan Africa, each USD 1 invested in attaining universal access to improved drinking water source yields in USD 2.50 economic benefit due to health care savings and gained additional productive days.<sup>37</sup></p> <p>Evidence from scientific studies shows that water quality projects reduce the incidence of diarrhoea by around 40%<sup>38,39</sup> and hence less time and money needs to be spent on hospital visits and medication.</p>
Access to affordable and clean energy services	<p><u>Neutral Score</u></p> <p>Uganda's energy supply largely depends on firewood.<sup>31</sup> Of the surveyed households in the project boundary of CPA 2, 97.5% use firewood and 2.1% use charcoal to boil water.<sup>26</sup> The fraction of</p>

<sup>35</sup> FAO, 2010: Global Forest Resources Assessment 2010.

<sup>36</sup> Evidence Action, 2013: Human Resources

<sup>37</sup> WHO, 2012: Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage.

<sup>38</sup> Fewtrell, L., Kaufmann, R.B., Kay, D., Enanoria, W., Haller, L., Colford Jr, J.M., 2005. Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis. *Lancet Infect. Dis.* 5, 42–52. doi:10.1016/S1473-3099(04)01253-8

<sup>39</sup> Waddington, H., Snilstveit, B., 2009. Effectiveness and sustainability of water, sanitation, and hygiene interventions in combating diarrhoea. *J. Dev. Eff.* 1, 295–335. doi:10.1080/19439340903141175

	<p>non-renewable biomass on total woody biomass used as fuel amounts to 81%.<sup>26</sup> Chlorine dispensers will reduce the consumption of firewood and hence substantially reduce the dependence of households on non-renewable energy sources. The total amount of energy consumed per household as well as the money spent for energy will decrease. However, the project will not have a significant impact on price and availability of energy and hence the parameter was scored neutral.</p>
Human and institutional capacity	<p><u>Positive Score</u></p> <p>The training provided by Evidence Action will increase the general knowledge about the importance of safe drinking water and improved hygiene behaviour.</p> <p>In some communities the elected promoters are women. This role strengthens the position of women in the communities.</p>
Quantitative employment and income generation	<p><u>Positive Score</u></p> <p>Besides a number of long-term employees, the program creates a range of temporary employment opportunities. In the initial working phase in a new district additional field associates are needed. The installation of chlorine dispensers is being done by local artisans.<sup>36</sup> Operation and maintenance of the chlorine dispensers require similar amount of work in all regions in Uganda and thus the jobs created are equally distributed over the project areas.</p>
Balance of payments and investment	<p><u>Neutral Score</u></p> <p>On the one hand carbon funding of the program may attract investors and therefore positively impact investments. On the other hand the dispenser hardware and chlorine is imported to Uganda. Evidence Action is keen to locally source the chlorine solution if a reliable producer can be identified. Overall the chlorine dispenser program has a very small impact on the investment balance of Uganda and therefore the parameter is scored neutral.</p>
Technology transfer and technological self-reliance	<p><u>Neutral Score</u></p> <p>The chlorine dispenser technology was extensively studied by Innovations for Poverty Action (IPA). The program will help to transfer this novel and innovative water purification technology to rural areas of Uganda. Evidence Action is eager to share and transfer knowledge about the dispensers to other organizations.<sup>36</sup> However, it difficult to keep track on the installations by other organizations and therefore the parameter is scored neutral.</p>

SECTION G. Sustainability Monitoring Plan	
No	1
Indicator	Water quality & quantity <sup>40</sup>
Mitigation measure	N/A
Chosen parameter	Fraction of samples from users that meet a quality threshold of < 10 CFU/100 ml for E. coli.
Current situation of parameter	This parameter focuses on users of the technology and a baseline situation can thus not be established. The water quality at household level is expected to be poor, as currently less than 60% of the population in the project area use water from an improved water source. Unimproved water sources are very likely to be contaminated and even if the source is classified as 'improved' many of them do not provide microbiologically safe drinking water. <sup>41</sup> Also, during transportation and storage there is a high risk of re-contamination, meaning that the water may not be safe at the time of consumption. <sup>42</sup>
Estimation of baseline situation of parameter	N/A
Future target for parameter	More than 90% of the households using chlorine dispensers have less than 10 CFU/100 ml E. coli in their drinking water.
Way of monitoring	How
	<p>Water quality tests on stored household drinking water in randomly selected households (cluster sampling approach).</p> <p>Total Chlorine Residual (TCR) is used to identify water that has been chlorinated. All household stored water samples that test positive for TCR are then tested for E.coli.</p> <p>The fraction of households with sufficient water quality is established as the number of samples with E.coli below 10 CFU/100 ml, divided by the number of samples that tested positive for the presence of TCR. The water quality tests may be carried out for a group of CPAs.</p>

<sup>40</sup> The water quantity is monitored as part of AMS-III.AV and reported in the emission reduction monitoring report

<sup>41</sup> WHO/UNICEF JMP RADWQ 2010, [www.wssinfo.org/water-quality](http://www.wssinfo.org/water-quality)

<sup>42</sup> Rufener 2010, Quality of Drinking-water at Source and Point-of consumption - Drinking Cup As a High Potential Recontamination Risk: A Field Study in Bolivia

	When	At least biannual (twice a year)
	By who	Evidence Action

No	2	
Indicator	Livelihood of the poor	
Mitigation measure	N/A	
Chosen parameter	Number of people treating their drinking water with chlorine.	
Current situation of parameter	Approximately 23,000 Ugandans, including 19,700 children under the age of five, die each year from diarrheal diseases – nearly 90% of which is directly attributed to poor water, sanitation and hygiene. <sup>43</sup> DHS data show that in the absence of chlorine dispensers only around 2.9% of Uganda’s population are using chlorine products for treating their water at home. <sup>44</sup>	
Estimation of baseline situation of parameter	8’800 (2.9% of the rural population in project area, based on dispenser database 243 person/dispenser * 1,250 dispenser) <sup>45</sup>	
Future target for parameter	More than 150,000 people are drinking safe water treated with chlorine (approximately 50% of total persons with access).	
Way of monitoring	How	Community adoption survey incl. interviews with 7 randomly selected households that are using water from 10 randomly selected waterpoints that have chlorine dispensers installed.  The water is tested for the presence of total chlorine residual. The value of this parameter is established as the percentage of stored household drinking water samples that test positively for the presence of total chlorine residual, multiplied by the total number of people living in the project area.
	When	At least every 4 months
	By who	Evidence Action

No	3
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<sup>43</sup> World Bank Water and Sanitation Program, March 2012. “Economic Impact of Poor Sanitation in Africa”, available at: <http://www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Uganda.pdf>

<sup>44</sup> Uganda Demographic and Health Survey, 2011. Available at: <http://www.measuredhs.com/pubs/pdf/FR264/FR264.pdf>

<sup>45</sup> Dispenser database: 243 persons per dispensers and a target of 1,250 dispensers to be installed = 303,750 persons. 150,000 correspond to approximately 50% of all potential users.

Indicator		Human and institutional capacity
Mitigation measure		N/A
Chosen parameter		Number of end users attending community education meetings (see section B 'operational procedure')
Current situation of parameter		Many people in rural Uganda do not know about the importance of clean and safe drinking water in reducing the prevalence of diarrhea.
Estimation of baseline situation of parameter		0
Future target for parameter		In total, 30,000 end users attend the community education meetings. It is expected that they will then share the acquired knowledge with their families and neighbors.
Way of monitoring	How	Records of community education meetings
	When	Once for every location within 60 days of installation of dispenser
	By who	Evidence Action

No		4
Indicator		Quantitative employment and income generation
Mitigation measure		N/A
Chosen parameter		Number of Evidence Action employees and contractors in Uganda with salaries at par or better than the average local/sector wage level (e.g. government employees' salaries) <sup>46</sup>
Current situation of parameter		Unemployment in Uganda is high and additional employment opportunities are needed.
Estimation of baseline situation of parameter		0
Future target for parameter		75 full- and part-time jobs by 2018 (at par or better than the average local/sector wage level)
Way of monitoring	How	Data from Evidence Action, Human Resources

<sup>46</sup> In 2016 the monthly salaries of Evidence Action staff range from UGX 300,000 to UGX 6.7 million and the monthly salaries of the Ugandan government staff range from UGX 200,000 to UGX 5.0 million. Hence Evidence Action's salaries are better than the average local wage level in Uganda. Evidence Action Uganda had 52 staff members in December 2015.

	When	Annually
	By who	Evidence Action

### Additional remarks monitoring

Internal audit shall be conducted annually by Evidence Action and audit reports are made publically available on [www.evidenceaction.org/who-we-are](http://www.evidenceaction.org/who-we-are) and can be accessed at any time.

## SECTION H. Additionality and conservativeness

This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

### H.1. Additionality

Not applicable. The section on additionally and choice of baseline are described in the voluntary GS Passport document (International Water Purification Programme POA) and follow Gold Standard guidance.

### H.2. Conservativeness

Not applicable. The section on additionally and choice of baseline are described in the voluntary GS Passport document (International Water Purification Programme POA) and follow Gold Standard guidance.

## ANNEX 1 ODA declaration



### ANNEX D - OFFICIAL DEVELOPMENT ASSISTANCE DECLARATION

Date: 27/06/2016

The Gold Standard Foundation

79 Avenue Louis Casal

Geneva Cointrin, CH-1216

Switzerland

RE: Declaration of Non-Use of Official Development Assistance by Project Owner of GS 5051

1875 K Street NW, 4th floor | Washington, DC 20016 As Project Owner of the above-referenced project, and acting on behalf of all Project Participants, I now make the following representations:

Pure Water Ltd., Technoparkstrasse 1, 8005 Zürich, Switzerland

I hereby declare that I am duly and fully authorized by the Project Owner of the above-referenced project to act on behalf of all Project Participants and make the following representations:

#### I. The Gold Standard Documentation

I am familiar with the provisions of The Gold Standard Documentation relevant to Official Development Assistance (ODA). I understand that the above-referenced project is not eligible for Gold Standard registration if the project receives or benefits from Official Development Assistance with the condition that some, or all, of the carbon credits (CERs, ERUs, or VERs) coming out of the project are transferred to the ODA donor country. I hereby expressly declare that no financing provided in connection with the above-referenced project has come from or will come from ODA that has been or will be provided under the condition, whether express or implied, that any or all of the carbon credits issued as a result of the project's operation will be transferred directly or indirectly to the country of origin of the ODA.

#### II. Duty to Notify Upon Discovery

If I learn or if I am given any reason to believe at any stage of project design or implementation that ODA has been used to support the development or implementation of the project, or that an entity providing ODA to the host country may at some point in the future benefit directly or indirectly from the carbon credits generated from the project as a condition of investment, I will notify The Gold Standard immediately using the Amended ODA Declaration Form provided below.





**III. Investigation**

The Gold Standard reserves the right to conduct an investigation into any project it reasonably believes may be receiving ODA with the condition that some or all of the carbon credits from the project will be transferred to the ODA donor country.

**IV. Sanctions**

I am fully aware that the sanctions identified in The Gold Standard Terms and Conditions may be applied to me or the above-referenced project in the event that any of the information provided above is false or I fail to notify The Gold Standard of any changes to ODA in a timely manner.

I swear that all of the statements contained herein are true to the best of my knowledge.

Signed:



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Name: Jeff Brown

Title: Executive Director

On behalf of: Evidence Action

Place: Washington D.C.

