

# CORPORATE SOCIAL RESPONSIBILITY SOLUTIONS RWANDA

**CONCEPT NOTE TO SUPPORT THE PROJECT PILOT FOR  
USING PEEPOO EQUIPMENT IN SELECTED SECTORS OF  
NYARUGENGE DISTRICT, KIGALI-CITY AND LATER TO  
EXPAND THE PROJECT IN OTHERS DISTRICTS OF  
RWANDA**

Submitted to REMA by:  
CSR Solutions Rwanda, Local NGO

January 2018

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**Corporate Social Responsibility Rwanda Concept Note to Support the PeePoo program against lack of latrines in selected sectors in Kigali City and other Districts of Rwanda**




**I. Rationale/Background**

Corporate Social Responsibility Solutions Rwanda (CSR Solutions Rwanda), is a Non-Government Organization with a legal status registered in October 2017, and in processing for having the official registration in Rwanda Government Board (RGB).

CSR Solutions Rwanda has a multidisciplinary personal team with more fifteen years of experience each in project development, project management, Environmental, social enterprises, construction and Health. The project has also a staff with experience in agricultural techniques.

Below the CSR Solutions Rwanda team with their professional experience:

<p><b>Surname &amp; First name:</b> Kabasha Hodari Eugene</p>  <p><b>Position :</b> Managing Director - CSR Solutions Rwanda <b>Address :</b> Kigali/Rwanda</p>	<p><b>Qualification</b> (BSc. Pharmacy) awarded by Kinshasa University <b>Work experience</b> in pharmacy industry and served as Regional Representative of Sanofi for Rwanda, Burundi and Djibouti for 14 years. Has expertise in management of sales teams, strategy development, planning of projects in various healthcare sectors. <b>Has ability to speak</b> French, English, Swahili, Lingala and Kinyarwanda.</p>
<p><b>Surname &amp; First name:</b> KARITANYI SAFARI Firmin</p>  <p><b>Position :</b> Deputy Managing Director - CSR Solutions Rwanda <b>Address :</b> Kigali/Rwanda</p>	<p><b>Qualification:</b> Master of Engineering in Agricultural Economics and Statistics awarded from Michigan State University (USA). Has 15 years of work experience working at the Ministry of Agriculture – Rwanda. Managed the Country wide Agriculture Statistics. Senior officer in various agriculture, environment, and Health together with Microfinance Projects of the USAID. He also has consulting expertise in area of community development; project management and Monitoring and Evaluation of projects development. <b>Has ability to speak:</b> English, French, Kinyarwanda, Swahili and Lingala.</p>

<p><b>Surname &amp; First name:</b> Ange Flora KAMUGISHA  <b>Position :</b> Program Director Rwanda  <b>Age :</b> 38 ans  <b>Address :</b> Kigali/Rwanda</p> 	<p><b>Qualification:</b> (BA. Social Work) awarded by university of Rwanda  <b>Work experience:</b> Has more than 10 years' experience in project management in different areas including education, Reproductive Health and Women Development. She has also been serving in Gender Equality and Equity. Major Organizations worked with include Concern Worldwide, Rwanda Girl Guides Association. Consulting with Smart Consultancy Ltd.</p> <p><b>Has ability to speak:</b> French, English and Kinyarwanda.</p>
<p><b>Surname &amp; First name:</b> Jean Bosco MUNYANKINDI  <b>Position :</b> Logistics  <b>Address :</b> Kigali/Rwanda</p> 	<p><b>Qualification:</b> Eng. Architecture awarded Specialist of Bioclimatic Structures,  <b>Work experience:</b> 18 of working experience in architectural system designs. Works focusing on bioclimatic and auditing of Home Energy. Member of KIAC  <b>Has ability to speak:</b> English, French and Lingala and Kinyarwanda.</p>
<p><b>Surname &amp; First name:</b> Lizinde Escarth Phenias  <b>Position:</b> Finance and Administration Director  <b>Address :</b> Kigali/Rwanda</p> 	<p><b>Qualification:</b> (MSc ICT Policy - BSc Education ) awarded by National University of Rwanda)  <b>Work experience:</b> 15 Consulting in Community and Public Development Projects (Direct Marketing Solutions, Ministry of Labor, Ministry of Local Administration, and World Bank Group). 2 years in Marketing and telecommunication (With Tigo and Airtel Rwanda). Director of School with Early Childhood and Elementary Education Programs for 4 years (School Les Poussins of Kigali).  <b>Has ability to speak:</b> English, French and Swahili and Kinyarwanda.</p>

## **2. Current Situation Analysis**

Today, more 1 billion people live in urban slums. This figure has increased from 715 million in 1990, and is expected to double by 2020. In informal settlements, water, electricity and sanitation are scarce and infrastructure is not keeping up as populations expand.

Available for purchase by the end-customer as a home toilet that can be used day or night, PeePoo offers an option to dirty, overfull latrines or defecating in public. The dignity and safety it provides, foremost to women and children, goes beyond basic sanitation.

CSR Solutions Rwanda though to introduce the new technology of latrines to solve the deficiency of toilets in urban area, especially in households located in different sectors of Kigali districts and other districts/sectors in Provinces of Rwanda.

PeePoo equipment is a toilet suitable for house-hold usage. This allows all sections (women, men, children, vulnerable groups) of the affected population rapid, safe and comfortable sanitation access at all times of the day and night. After use, PeePoo is directly closed with a knot and the dangerous pathogens in the faeces are instantly closed off from the immediate environment. Because the PeePoo is odor-free for 24 hours, it can be conveniently stored on house-hold level.

PeePoo equipment comes in a Personal Pack, each Kit containing 28 Biodegradable Plastics PeePoo toilets and one disposal bag. Distribution is usually integrated with already established routines for hygiene promotion and supply of hygiene kits. Initially the families can collect their used PeePoo on household level in disposal bag. Community collection is then set up and human excreta can safely be removed from the community and disposed without contaminating the environment.

No fixed infrastructure is needed for the PeePoo equipment and since PeePoo is compact in size, it is available from day one after distribution. This also enables efficient transport, stock keeping and quick distribution.

CSR Solutions Rwanda, request to REMA to approval the usage of these biodegradable plastics for starting the implementation of the PeePoo project in Nyarugenge District as a project pilot and to expand in future to others districts of provinces in Rwanda.

The collect of human excreta will be facilitate by using a special car and feces will be processed before applying in farms for the organic fertilizers purposes. In the first time, the fertilizers will be distributed by CSR Solutions Rwanda for free and along the period of the project, farmers will buy the fertilizers at a cheap prices compare to the prices of local markets.

CSR Solutions Rwanda will provide more training to farmers with purpose to know how the organic fertilizeris applied in the soils and at the end of crop season, the results expected will increase the yield and generate the revenues of households' beneficiaries of PeePoo equipment.

## **3. Selection of Districts of CSR Solutions Rwanda Short-term Intervention and Approach**

Out of the three targeted districts (Nyarugenge, Gasabo, Kicukiro) of Kigali –City , one was selected (Nyarugenge District) for the CSR Solutions Rwanda as aPilot District for intervention of PeePoo program against lack of latrines in households and will be implemented in two selected sectors: Kimisagara and Gitega. The program will be expanded in others districts even in all districts of provinces in Rwanda as cited above.

This selection of two sectors is based on the three criteria: (1) Difficult of own latrines for many households because of lack of space to build toilets; (2) Many households shares latrines and can cause several epidemics diseases; and (3) Fight against dirt from human waste that are scattered in surrounding areas, in sewers and culverts or gutters.

Therefore, to assist the District in battling the spread of human excreta in different places; CSR Solutions Rwanda is proposing the usage of PeePoo equipment in households which have not accessibility to toilets and others locations as well as bus terminus, prisons in police station etc.... to provide them and safety equipment approved by the manufacturer of the PeePoo equipment and which has no effect on the environment and will come to solve the problem of dirt in urban and rural areas.

**Table I: Quantity of in-kind PeePoo kit equipment to be distributed through CSR Solutions Rwanda in first phase of the pilot project.**

<b>Pilot Sectors targeted in Nyarugenge District</b>	<b>Affected Households</b>	<b>Proposed quantity of PeePoo biodegradable plastic bags</b>	<b>Proposed quantity of PeePoo container</b>	<b>Proposed quantity of transportable bags containing biodegradable plastics bags</b>	<b>Proposed quantity of PeePoo cabins</b>
Gitega	300	42,000	1,500	600	300
Kimisagara	400	56,000	2,000	800	400

The ultimate goal of the CSR Solutions Rwanda intervention will be for the households, who will demonstrate the lack of latrines, to reinforce their capacity of sanitation using properly and correctly PeePoo kit to fight against the dirt from human excreta to prevent epidemics disease which can be spread into surrounding households and after processing these excreta, the identified households practicing agriculture can use it as organic fertilizers in their farms or kitchen gardens.

#### **4. Implementation of short term interventions**

In the implementation of this project, CSR Solutions Rwanda will ensure that REMA has approved the using of PeePoo biodegradable plastic bags and starting the mechanism of the implementation of using PeePoo kit by beneficiaries.

The monitoring safety requirements and results in order to track impact and control usage of the PeePoo equipment and setting in different places will be facilitate by CSR Solutions Rwanda staff. CSR Solutions Rwanda plans to pilot the distribution mechanism in selected district and then expand the project in others districts after we have learned from potential challenges or failures. For the purpose to reach the targets, the recipients of the PeePoo equipment will be assisted technically by CSR Solutions Rwanda staff and work in close collaboration with local district staff in charge of environment, health and Agriculture extension workers and other relevant stakeholders.

Based on studies of the willingness of CSR Solutions Rwanda in the targeted areas, PeePoo predicts a need for price support of its PeePoo solution until 2020. To maintain cleanliness in these places, the entry only into the public toilets will be paid in order to maintain the costs related to the operation costs of these units.

The community members can take their own used PeePoo to the drop-point, benefitting from the refund. But they can also make use of a service that some micro-entrepreneurs are offering; they come around every morning to collect their neighbors used PeePoo, utilizing the refund as payment for their business. A

much appreciated service that both stimulates the local economy as well as the usage of PeePoo. From the drop-points, used PeePoo are transported daily to a storage and processing area and then used as fertilizer by farmers in selected sectors or other farmers requesting the usage of this organic fertilizer.

## 5. From waste to value

With the capacity to safely transform human faeces into pathogen-free fertilizer in a short period of time, PeePoo can contribute to enrich depleted soil and quickly improve food security.

Because fertilizers are expensive and scarce in less-developed countries, economic systems may develop around the collection and distribution of used PeePoo. The fertilizer produced by used PeePoo's can be utilized by households or schools, or sold profitably to local farmers.



Fig: Transportable Bags containing the biodegradable plastics bags for human excreta

## 5. Faecas into valuable fertilizer.

PeePoo is made of a high-performance degradable bio-plastic which meets EU Standards 13432. This means that the plastic not only disintegrates, but also that the molecules are broken down into carbon dioxide, water and biomass. The bio-plastic is made up of a mixture of aromatic co-polyester and polylactic acid (PLA) with small additives of wax and lime. When properly sanitized, the human faeces and urine are rich in nutrients, which can be used to increase crop yields. Furthermore, if mixed with the soil, faeces increase the organic matter content and improve the water holding capacity.

When the pathogens in PeePoo have been inactivated, four weeks after use, the treated faeces will mainly be a nitrogen fertilizer due to the added urea for sanitation. Other nutrients, such as Phosphorus and Potassium, are also available for the plants and thereby improve the soil fertility. Additionally, the organic matter in the faeces will improve the soil's structure, buffering capacity, and water holding capacity. In the long term, this will improve the potential harvest from gardens and fields where used PeePoo's have been buried.

The used PeePoo thus offers a safe and rational nutrient for rural or urban farming, not the least because fertilizers are expensive and scarce in less developed countries. Together with our partners in Sweden, CSR Solutions Rwanda will develop an economic system around the resale of used PeePoo's. Consequently, the used PeePoo's represent a local resource instead of a contaminant.



Fig: kitchen gardens containing the organic fertilizers from human excrement.

The lack of agricultural production in Africa and especially in Rwanda, which causes undernourishment, has been identified as one of the major reasons for Disability Adjusted Life Years (DALY). Today, mineral fertilizers are imported from outside country and are very expensive when they are not distributed for free or as grant from any national or international grant.

The addition of fertilizers and organic material is required so that land in these areas might be, to some degree, cultivatable.

In Asia, especially in China, the farmers uses human excreta as organic fertilizer and the results shows that their production were increased at the satisfactory level.

## 6. How to use PeePoo



This kit is individual to which each beneficiary receives a complete kit and it's a single use. The person opens the package containing biodegradable bags and draws one for use. He or she carefully opens this plastic bag and covers it on a plastic pot. The user makes her needs, by finishing, he or she packs this bag and throws it into the big bags that receive these little bags containing human excreta. As soon as these bags are full, the vehicle comes to collect these dirt and deposits them in a well-protected place before being treated in organic fertilizer.

**Table 5: Timeline for the pilot project interventions in Nyarugenge district**

<b>CSR Solutions Rwanda Proposed activities</b>	<b>Timeline</b>	<b>Responsible CSR Staff</b>
1. Meeting with District authorities	18 Dec 2017	Director General and Deputy Director General
2. Submission of Concept Note to REMA for approval of PeePoo biodegradable plastics	03 Feb 2018	Director General
3. Meeting with REMA for presentation of PeePoo kit , project intervention and expect results for the pilot project in selected sectors of Nyarugenge District	12-16 Feb 2018	Director General, Deputy Director General and Program Director
4. Identification of targets beneficiaries of PeePoo project	1-31 Jan 2018	Director General, Deputy Director General and Program Director
5. Organizing workshop and training with beneficiaries to use PeePoo and how to transform waste to value and how to apply it in farms	19-23 Feb 2018	Director General, Deputy Director General, Program Director, Logistic Director and Administration and Finance Director
6. Purchase and distribute of PeePoo equipment to identified beneficiaries(700 households approximately)in selected sectors	March 2018	Director General, Deputy Director General, Logistic Director and Administration and Finance Director
7. Implementation and startup of the pilot project in Nyarugenge District	April 2018	Director General, Deputy Director General and Program Director
8. Monitoring and evaluation of PeePoo distribution, impact assessment and Reporting	Jan-June 2018	Director General, Deputy Director General and Program Director

## 7. Conclusion and Next Steps:

Many efforts are being made by CSR Solutions Rwanda to implement the PeePoo program. The organization waiting for approval of usage of biodegradable plastics bags by REMA to start collecting human excreta into the selected sites and use it by beneficiaries who have farms to apply for fertilizer (as the organic fertilizer) and at the end, to increase production of crops.

Before to use the human excreta as the organic fertilizer, a processing will be done to ensure that the products are not contains micro-organisms can infect the users. Also, CSR Solutions Rwanda request to REMA to accelerate the approval of the using of these biodegradable plastic bags, so that CSR Solutions Rwanda will follow properly its timeline of project implementation. A demonstration session for the using of organic fertilizer will be made in small scale or in kitchen garden of households' beneficiaries of PeePoo kit to confirm the biodegradability of these plastic bags in their soils.

CSR Solutions Rwanda can and must be responsive to these expressed needed. Working from the above premise and assuming that the target of **700 households include others beneficiaries of PeePoo** will be active in two sectors (Gitega and Kimisagara) in Nyarugenge District that are currently have lack of latrines and organic fertilizers to apply in their farms.

The next steps of this planned intervention in the immediate term are as follows:

1. Discuss with REMA and receive approval to proceed using biodegradable plastic bags
2. Finalize the list of beneficiaries of the PeePoo equipment in two selected sectors in Nyarugenge District.
3. Consultative Meeting with Rwanda Agriculture Board and Ministry of Agriculture for the usage of the human excreta as the organic fertilizer
4. Implement the activities in collaboration with the District and Sectors authorities
5. Monitor impact and develop lessons learned for next steps of intervention/implementation.
6. Determine the overall budget estimation for CSR Solutions Rwanda intervention.