Project design document form for small-scale CDM project activities

(Version 08.0)

Complete this form in accordance with the Attachment "Instructions for filling out the project design document form for small-scale CDM project activities" at the end of this form.

PROJECT DESIGN DOCUMENT (PDD)	
Title of the project activity	Institutional Improved Cook Stoves for Schools and Institutions in Uganda
Version number of the PDD	03.0
Completion date of the PDD	02/02/2017
Project participant(s)	Simoshi Limited
Host Party	Uganda
Applied methodology(ies) and, where applicable, applied standardized baseline(s)	AMS.II.G, version 08.0
Sectoral scope(s) linked to the applied methodology(ies)	03
Estimated amount of annual average GHG emission reductions	31,286

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

The purpose of this project activity is the dissemination of institutional improved cook stoves (IICS) in Uganda.[1] The project aims at changing the traditional cooking habits used in up to around 450 schools and institutions[2], benefiting approximately 340,000 individuals[3], reducing 31,286[4] tonnes of annual CO2, and 219,003 tonnes of CO2 during the 7 year crediting period.

The IICS may be of different models and/or different sizes and will consume firewood. The different models of IICS may be manufactured by local and/or international stove manufacturers. As schools and institutions move up in the energy ladder, and fuel briquettes made of agricultural residues become available in Uganda, these IICS could also be used with such fuel briquettes in the future. In the case that a school/institution/IICS will use briquettes made of renewable biomass (agricultural residues and/or firewood from renewable plantations), the PP will ensure that no emission reduction credits will be claimed from the fuel switch from non-renewable to renewable biomass but only from the fuel savings resulting from the introduction of the IICS.

The IICS are both portable as well as fixed built-in types, serving school and other institutional users like prisons, plantation estates and hospitals[5]. These IICS are more efficient in transferring heat to the cooking pots, thus IICS require less fuel to prepare the same meal. This efficiency is translated into fuel savings compared to traditional stoves used in Uganda. By reducing fuel consumption, the project activity reduces greenhouse gas emissions from the use of fuel. This reduction in fuel consumption is estimated and corresponding CO2 emission reductions are calculated from these savings.

The project activity shall initially distribute the Ugastove portable rocket firewood IICS of different sizes to schools (one example see illustrated in figure 1 below), but may distribute other models of IICS that meet the minimum thermal efficiency requirement of 20% to schools and/or other institutions later on. The different IICS sizes are conditioned by the saucepan capacity and range from 30 litres and up to 450 litres.

[1] The project had initially the intention to be included under the PoA 7014 : Improved Cook Stoves for East Africa (ICSEA), however due to different reasons (to be kept confidential), the PP preferred to proceed with a standalone activity.

[2] Though the SSC threshold calculation has resulted in a maximum of 400 institutions (for details, please see tab 'SSC threshold'/CER calculation excel spreadsheet), this might change over time since it depends on several factors, like $B_{y,savings,i}$, the proportion of boarding schools to day schools, thermal efficiency and loss in efficiency of the IICS, and number of students/staff per institution. If those factors change, the SSC threshold might be higher or lower than 400 institutions. PP will ensure through continuous checks that the number of schools/institutions included into the project do not pass the SSC theshold at any time during the crediting period. If the SSC threshold allows more than 450 institutions, the project may disseminate IICS to more than 450 schools/institutions until the SSC threshold is reached.

[3] This is calculated by multiplying 450 schools/institutions with the average size of 756 heads of the first 24 included institutions.

[4] Downrounded value

[5] Commercial establishments such as restaurants and hotels are excluded as per ASB0016 and hence cannot be included in this project activity.

Figure 1 – Ugastove portable rocket firewood IICS

The Uganda National Alliance for Clean Cooking (UNACC) estimated in 2012, that only 7% of the population were using clean and efficient cook stoves[6]. Similarly, the institutions in Uganda such as schools, health centres, prisons, commercial buildings and restaurants, primarily rely on traditional cooking technologies such as three stone stoves, open fires etc[7]. (Government of Uganda, 2001). As per the Uganda Bureau of Statistics (UBOS) 2012 survey[8], 14.88% of the population have access to power grid services (54.8% in urban, and 7% in rural areas). If solar home systems and diesel generators, used mainly by rural households, are included, the national electrification access rate represents 26.1%. The most prevalent form of cooking fuel in the schools of Uganda is wood with 96% of the schools using it as their main cooking fuel, followed by charcoal with 4% of the schools[9] (Ministry of Education and Sports, 2013). The baseline scenario is the same as the scenario existing prior to the implementation of the project activity.

Simoshi Limited (Simoshi) is the project participant of this project activity. As such, it will coordinate the efforts to manufacture, select the IICS suppliers, promote, sell and distribute the IICS in Uganda and comply with the requirements of this project activity.

During implementation, Simoshi will:

- Test IICS models according to the project activity requirements
- Manufacture, procure IICS from manufacturers, market, sell and distribute IICS to schools and institutions
- Annually maintain all IICS population
- Keep records of sales and schools/institutions as per the monitoring plan
- Keep current with regards to the UNFCCC requirements
- Organise and collect all necessary information from schools and institutions for monitoring purposes

[6] Ministry of Energy and Mineral Development (June 2015). “Uganda’s Sustainable Energy for all Initiative – Action Agenda”. Page 9.

[7] Ministry of Energy and Mineral Development (June 2001). “National Biomass Energy Demand Strategy 2001-2010 [http://www.energyandminerals.go.ug/downloads/BEDS-Contents.pdf]

[8] http://www.ubos.org/onlinefiles/uploads/ubos/statistical_abstracts/Statistical%20Abstract%202014.pdf

[9] http://www.education.go.ug/files/downloads/Abstract_2013.pdf

- Provide technical and administrative support to schools and institutions to guarantee compliance of IICS and record keeping with the project activity requirements
- Manage the execution of CER agreements and distribution of the benefits
- Be responsible for the monitoring activities and data management required during the lifetime of the project activity
- Maintain a database of sales records used to compute CERs and ensure that no double-counting of IICS sales occurs
- Be the focal point for CER registration and verification

IICS are sold through payment schemes that include three equal instalments, at no interest rate, allowing schools and institutions to comfortably pay back their debt throughout the year. Schools and institutions do not need to search for money outside their budget or secure financial loans, as they use the money saved from firewood not consumed to pay back to Simoshi. By providing flexible consumer finance options and free annual maintenance, Simoshi expects to increase the rate of IICS adoption in schools and institutions.

National and international donors also support schools/institutions by covering partially or totally the cost of the IICS.

When purchasing the IICS, the school/institution fills a sales agreement with Simoshi that contains, among others, information about the IICS model, price and payment, the name, location/address and phone number of the school/institution. This information will allow the identification and the monitoring of the IICS and its usage. By filling the sales agreement, the school/institution will agree to discontinue the use of the traditional stove, and to use the IICS instead. By signing the sales agreement, the school/institution is aware of and willing to give up its rights on emission reductions and transfer all carbon rights to Simoshi. Additional measures such annual maintenance schemes of the IICS population will confirm that the IICS is in operation and will help to track the IICS.

The proposed CDM project activity is not a CPA that has been excluded from a registered CDM PoA as a result of erroneous inclusion of CPAs.

The project activity will contribute to the sustainable development in the following way:

- **Environmental aspects**

The use of improved cooking stoves will substantially lower the amount of non-renewable biomass that is used for school and institutional cooking. The already selected UgaStove portable firewood IICS has shown to use significantly less wood fuel to cook the same amount of food in comparison to traditional stoves, hence schools reporting to having reduced their firewood expenditures by at least 50% per school term.

- **Social aspects**

Enhancing community access to essential social services (energy, health)

The dissemination of IICS and their use by end-users will very positively support the sustainable development of Uganda, e.g. through health benefits. This project activity targets the 96% of the Uganda population that depends on firewood or charcoal for cooking purposes. Improved cook stoves positively affect institutional energy demand by drastically reducing the quantity of fuel needed to cook. This reduction will not only reduce deforestation in the country, but will directly save on the amount spent on wood by schools and institutions, or the time women and children spend collecting wood.

Community participation in the project implementation, monitoring and evaluation

Communities will be deeply involved in the implementation of the project activity. The dissemination of IICS requires a production and supply chain that generates local employment in varying degrees for their manufacturing, assembling, distribution, maintenance and sales.

The use of social innovation and innovative technologies such as an IICS provides an added value, especially when addressing the younger generation. Children spend a large part of their time in school. Activities aimed at addressing the benefits of clean energy build the perception, motivation and behaviour for them to transfer that knowledge to their households, hence changing behaviour towards more efficient cooking practices.

Gender balance and participation of disadvantaged groups

Women are the main target user group of the project activity. Moreover, the use of IICS offers a viable pathway for women empowerment. It is usually women responsible for all cooking activities (both at the household and institutional levels). Women play an instrumental role in raising awareness between their peers and community members about the dangers of utilising traditional cooking methods and indoor/outdoor air pollution. The knowledge transfer provided from those using IICS at the schools, and the children witnessing and benefiting from it, will assist in driving demand, speeding up the adoption and widespread use of an improved cook stove within their communities. Addressing gender issues in clean energy concerns recognises that women are key players in the role played in the health, environmental, economic and climate change arena. Closing the gender gap will assist towards an equitable and robust effort towards sustainable development in Uganda.

- **Economic aspects**

Contribution to employment generation

The dissemination of IICS requires a large number of people to be involved in their manufacturing, assembling, distribution, maintenance and sales. Regardless of where the IICS is manufactured, the project activity will create employment right along the supply chain to a more modern level of mass production and distribution than the present artisanal manufacture of traditional stoves. This transformation of the delivery of IICS in schools and institutions will stimulate a more widespread adoption of distribution and manufacturing techniques that will spur rural economic development.

Contribution to saving and generation of foreign exchange

A fair-trade share of the carbon credit income is a particular feature of Simoshi's project activity. IICS are sold through payment schemes that include three equal instalments, at no interest rate, allowing schools and institutions to comfortably pay back their debt throughout the year. Schools and institutions do not need to search for money outside their budget or secure financial loans, as they use the money saved from firewood not consumed to pay back to Simoshi. By providing flexible consumer finance options and free annual maintenance, Simoshi expects to increase the rate of IICS adoption in schools and institutions.

Contribution to increased production of marketable goods and services

The project activity will create a nationwide market for IICS. These highly attractive energy and money saving appliances will rapidly spread into all rural and urban markets and will transform the energy profile of domestic and institutional cooking. By providing flexible consumer finance options and free annual maintenance, Simoshi expects to increase the rate of IICS adoption in schools and institutions.

Mutual economic benefits accruing from project activities

Sensitisation happens at the point of sale where environmental concerns are used as a marketing tool. Environmental campaigns, benefits from the use of an IICS and best practice on the use of IICS are carried out at schools/institutions during parent visitation days and special events. Children and their parents benefit from knowledge sharing on clean cooking and air pollution.

Contribution to increased demand for services

The demand for new services will be created by the widespread use of the IICS – in the form of stove maintenance technicians (all IICS will require an annual maintenance upgrade to bring them back into 'as new' condition); monitoring and sampling teams will be permanently recruited to verify that IICS are in regular use for verification purposes; and IICS testing personnel will be trained to perform rating and testing work.

Contribution to redistribution of development to address area imbalance in development
Simoshi shares part of the revenues accrued from the sale of carbon credits by providing the schools with interest free annual credit to pay back for the cost of the IICS, free annual maintenance for up to 7 years, and continuous monitoring and education to all kitchen staff and school members on the best use of the IICS.

- **Technology aspects**

Environmental friendly technology
IICS are beneficial to the environment as they contribute towards reducing CO_2 emissions when compared to traditional cooking technologies, such as three-stone fires. There is no evidence that the disposal or recycling of an improved stove will cause any significantly harm to the environment. Most IICS are built using clay, vermiculate, metal, cast iron, aluminium, cement and paint. Materials such as plastic are rarely used.

Technology transfer
Past efforts to popularise IICS, especially by NGOs and donor organisations, have resulted in the creation of several stove manufacturing companies and groups in Uganda. Knowledge about improved cook stove technology from other countries was accessed, and was adapted for local conditions by a small number of local manufacturers producing IICS on a modest scale.
There are several identified weaknesses in the institutional IICS market, such as financial barriers and/or no access to capital to purchase an IICS as well as lack of consumer awareness and information. By providing the IICS with a package of benefits to the schools/institutions, the above weaknesses are tackled paving the way for an increase in technology adoption and transfer.

Efficiency technologies
The project activity will create employment right along the supply chain to a more efficient level of mass production and distribution than the present artisanal manufacture of traditional stoves. This will substantially lower manufacturing costs, and will facilitate IICS production to a modular design, allowing for simple annual maintenance events. This transformation of the manufacturing and delivery will stimulate a more widespread adoption of efficient distribution and manufacturing techniques that will boost rural economic development.

Acceptability of technology by local community
The specific design of an IICS plays a major role in its acceptance by end-users. The IICS's ease of use by women is a key concern of Simoshi. If IICS are not carefully designed for local users' preferences they will either not be sold or will fall out of use after a short period of time, and thus will not qualify for carbon credits. The project activity will promote competition between suppliers to meet consumers' requirements for well-designed and affordable IICS, which can be maintained to ensure their long-term use.

A.2. Location of project activity

A.2.1. Host Party
Republic of Uganda (Uganda)

A.2.2. Region/State/Province etc.
>> The project boundary of this project includes whole Uganda including its 111 districts and the city of Kampala.

A.2.3. City/Town/Community etc.
>> The project boundary of this project includes whole Uganda including its 111 districts and the city of Kampala.

A.2.4. Physical/Geographical location

Uganda is a landlocked country in East Africa. It is bordered to the east by Kenya, to the north by South Sudan, to the west by the Democratic Republic of the Congo, to the southwest by Rwanda, and to the south by Tanzania. The southern part of the country includes a substantial portion of Lake Victoria, shared with Kenya and Tanzania.

The latitude and longitude denominations of Uganda are 1° 00 North and 32° 00 East.

Figure 2 – Map of Uganda

A.3. Technologies and/or measures

The project activity will encompass any of the following different types of IICS:

Category Number	Type
1	Fixed built-in institutional stove
2	Portable institutional stove

IICS are more efficient than traditional stoves as they reduce heat loss. Simoshi monitored the firewood purchase from 18 schools in Kampala and Wakiso districts prior to the installation of the IICS and during the first 6 months after the IICS were installed and fully utilised. The already selected UgaStove portable firewood IICS has shown to use significantly less firewood to cook the same amount of food in comparison to traditional stoves, hence schools reporting to having reduced their firewood expenditures by at least 50% per school term. During the life of the project, research and development work may result in more efficient IICS. These shall be included in this project activity subject to the appropriate tests proving real and measurable quantities of firewood saved.

The most common baseline traditional stove for firewood in schools in Uganda is the three stone fire[10], and for charcoal, used to a minor extent, the traditional metal stove, such as the metal sigiri in Uganda.

[10] In 2007, the adoption of institutional cookstoves in Uganda was reported at 450. As a part of „Modern Energy Services Programme" the cumulative target for institutional stoves by 2012 was 1500 (The Renewable Energy Policy of Uganda).

Figure 3 – three-stone fire stove

Figure 4 – UgaStove portable rocket firewood IICS for 30 litres saucepan capacity with a thermal efficiency of 27.8%

The IICS allowed in this project activity, include, but are not limited to, different models of the rocket-stove design. However it is likely that new designs will come onto the market and could be included in the project activity.

Rocket stove design: Its principle features focus on achieving efficient fuel combustion at a high temperature by ensuring a good air draft into the fire, controlled use of fuel, complete combustion, and the efficient use of the resultant heat. IICS using rocket principles can be very simple or complex. However, they all include the following design components: an L-shaped, insulated combustion chamber; a small fuel-feed opening to restrict the amount of fuel added to the stove at

As per MEMD Annual Report for 2011, the ministry with support from GIZ/PREEEP has done the dissemination of both household and institutional cookstoves. A total of 77 institutions and SMEs were reached under this programme. Further, the report states that less than 5% of the schools surveyed have energy efficient stoves, while most of the schools use traditional cooking technologies. (Institutional stove survey and evaluation) (Annual Report, 2011).

one time; and a small gap between the stove and cooking pot to improve heat transfer by forcing hot flue gases against the sides of the pot[11].

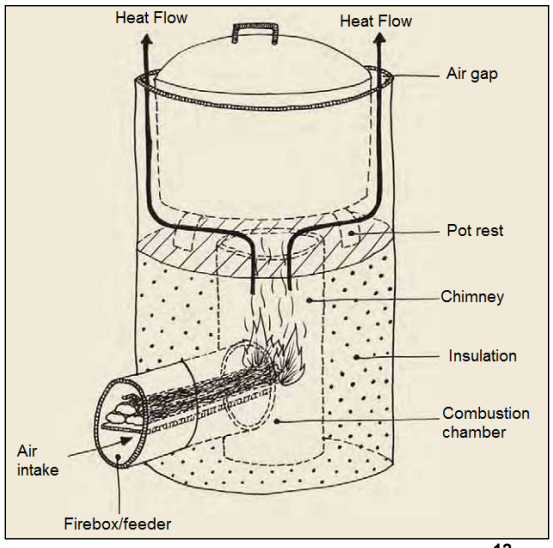

Figure 4 - Diagram rocket stove design[12]

This categorisation of IICS is only indicative, and further research and development is expected to improve the rocket design, and completely new designs and models are likely to come onto the market based on other technical principles such as wood fuel gasification etc. The IICS illustrated is only an example of IICS that may be disseminated under the project activity.

A.4. Parties and project participants

Party involved (host) indicates host Party	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Republic of Uganda (host)	Simoshi Limited (private entity)	No

A.5. Public funding of project activity

No public funding or ODA has been received for the implementation of the project activity. If ODA will be received in future, it would be ensured that no diversion of ODA takes place.

A.6. Debundling for project activity

According to the methodological tool 'Assessment of debundling for small-scale project activities', version 04.0 published as annex 13 of the meeting report of EB 83 the project activity is exempted from performing a de-bundling check i.e. considered as being not a de-bundled component of a large scale activity if the following condition applies:

14. If each of the independent subsystems/measures (e.g., biogas digesters, residential solar energy systems, kerosene or incandescent lighting replacements) included in one or more CDM project activities is no greater than 1% of the small scale thresholds defined by the applied methodology and the subsystems/measures are indicated in the PDDs to be each implemented at or

[11] Technical description based on; USAID 2010. Fuel-efficient stove programs in humanitarian settings

[12] Adapted from a diagram by Peter Scott, http://www.hedon.info/GettingTechnologiesToTheMarket

in multiple locations (e.g., installed at or in multiple homes) then these CDM project activities are exempted from performing a de-bundling check, i.e., considered as being not a de-bundled component of a large scale activity.

IICS are installed in several different independent institutions (such as schools and possibly prisons and hospitals later on).

Each school/institution participating in the project will use more than one IICS (schools e.g. do commonly use between 2 to 5 IICS[13]) to cover its cooking needs, hence the scenario for a school/ institution using only one IICS can be discarded. Taking this and the average head size of the first 24 institutions included into consideration, tab 'Debundling and Additionality'/ER calculation Excel spreadsheet shows that in both scenarios 'IICS used in boarding school only' and 'IICS used in day school only' the thermal energy savings per IICS are below 1.8 GWh_{th}, except for the scenario in which 1, 2 or 3 stoves are used in a boarding school only. None of the 24 institutions included so far in the project use 1, 2 or 3 stoves in a boarding school only, hence this scenario can be discarded and is also not really expected in the future.

However, for the scenario where 1 or 2 IICS are used in a mix of boarding and day schools, the thermal energy savings exceed the threshold of 1.8 GWh per IICS. There are a few cases amongst the 24 institutions included so far in the project being under this situation (for more details, see ER calculation excel spreadsheet, tab 'Debundling and Additionality'), hence the PP has performed a de-bundling check. As for the case in day schools, the scenario of using only 1 IICS has been discarded because schools commonly use between 2 to 5 IICS.

Debundling check:
It is confirmed that there is no other registered SSC CDM project activity or an application to register another SSC CDM project activity with Simoshi as PP, using the same technology and whose project boundary is within 1 km of the project boundary of the proposed SSC activity at the closest point, hence there is no risk of occurrence of debundling.

SECTION B. Application of selected approved baseline and monitoring methodology and standardized baseline

B.1. Reference of methodology and standardized baseline

- AMS.II.G "Energy efficiency measures in thermal applications of non-renewable biomass" Version 8.0[14]
- Methodological tool "Project and leakage emissions from biomass" Version 02.0
- Methodological tool "Demonstration of additionality of small-scale project activities" Version 10.0
- ASB0016 Standarised baseline 'Institutional Cook Stoves in Uganda', Version 01.0
- General guidance on leakage in biomass project activities (version 03)

B.2. Project activity eligibility

The small-scale project activity to be applied is a Type II project: "Energy Efficiency Improvement Project" and applies the small scale baseline and monitoring methodology AMS II.G, version 8.0,

[13] Some schools may use even more than 5 IICS.

[14] http://cdm.unfccc.int/methodologies/DB/UFM2QB70KFMWLVO7LJN8XD1O2RKHEK

"Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass". The following table shows how each of the applicability criteria of the methodology is complied with by the project activity.

Applicability criterion AMS-II.G	Compliance with the applicability criterion
The methodology comprises efficiency improvements in thermal applications of non-renewable biomass. Examples of applicable technologies and measures include the introduction of high efficiency biomass fired project devices (cook stoves or ovens or dryers) to replace the existing devices and/or energy efficiency improvements in existing biomass fired cook stoves or ovens or dryers.	The purpose of this project activity is the dissemination of IICS in Uganda, hence this applicability criterion is met.
In case of cook stoves, the methodology is applicable to introduction of single pot or multi pot portable or in-situ cook stoves with rated efficiency of at least 20 per cent.	The project activity may accommodate both single pot or multi pot portable or in-situ IICS models. The PP will ensure that any model distributed as part of the project activity will have a thermal efficiency of at least 20%. The efficiency of the IICS will be tested by a national standards body, an appropriate certifying agent recognized by that body, the PP Simoshi or alternatively the manufacturer specifications on efficiency based on water boiling test (WBT) carried out by the manufacturer will be used. A sample test on three cook stoves with three tests for each stove will be conducted complying with the 90/10 precision requirement. It will be ensured that the stove manufacturer has a quality management system in place (e.g. proven stove design is employed and materials of high quality and consistency are used for the production of stoves and quality of the input material and critical dimensions of the produced stoves are tested). This is in line with the response given from the SSC WG to Request for Clarification SSC_726. 1. Sample tests on three Ugastove portable rocket firewood IICS for 30 litres[15] saucepan capacity with three tests for each IICS have been conducted resulting in an average efficiency of 27.8%. It has been demonstrated to the DOE that the results complied with the 90/10 precision requirement[16] as well as that Ugastove IICS with different saucepan capacities are of similar design and that comparable repair and maintenance practices are undertaken on all project IICS, irrespective of the size. The manufacturer follows the Quality Assurance and Quality Control Manual from the PP on all IICS manufactured of different saucepan capacities. The PP applies standardised maintenance and repair practices to all Ugastove IICS, irrespective of the size. Applicability criterion is met.
The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input.	The PP will ensure that the aggregate thermal energy savings will not exceed 180 GWh_{th}/year at any time during the crediting period. See ER calculation Excel spreadsheet, tab 'SSC threshold'

[15] 30 litres is the minimum capacity for Ugastove portable rocket firewood IICS.

[16] The value of the t-distribution for 90% confidence has been used instead of Z value.

	for further details. Applicability criterion is met.
Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	Non-renewable biomass has been used since 31 December 1989 as the FAO describes in its Global Forest Resources Assessment 2010 for each country in which it is shown that there has been a clear reduction of forest coverage since 1990[17]. Applicability criterion is met.
For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology.	If in future some of the biomass will be sourced from renewable sources (e.g. briquettes from renewable biomass/firewood from renewable plantations), PP would not claim ERs for the fuel switch from non-renewable to renewable biomass but just for the fuel savings resulting from the use of the IICS. Hence, the use of a corresponding Type I methodology is not applicable.
Applicability criterion ASB0016 (standardized baseline)	Compliance with the applicability criterion
ASB0016 is only applicable to the cookstoves of the following type of institutions: (a) Boarding Schools (b) Day Schools and (c) Prisons, Plantation estates and Hospitals	The PP will ensure that only institutions as allowed by ASB0016 will be included under the project activity. Hence, the project activity is limited to boarding and day schools as well as to prisons, plantation estates and hospitals. PP's database will transparently indicate the type of institution. Hence, applicability criterion is met.
CDM project activities can apply the standardized baseline under the following conditions: (a) The project activity is implemented in Uganda (b) The CDM methodology that is applied to the project activity is SSC methodology AMS-II.G and/or SSC methodology AMS-I.E	The project activity is located in the country of Uganda (see section A.2 of the PDD) and applies the methodology AMS-II.G (see section B.1 of the PDD). Hence, both applicability criteria are met.

B.3. Project boundary

The gas included is carbon dioxide in the project boundary which is the physical, geographical site of the IICS.

The project activity will disseminate IICS over the entire territory of the Republic of Uganda.

B.4. Establishment and description of baseline scenario

According to paragraph 14 of AMS.II.G (version 08.0), it is assumed that in the absence of the project activity, the baseline scenario would be the use of fossil fuels for meeting similar thermal energy needs, and this baseline is applied.

As per the methodology, it is assumed that in the absence of the project activity, the baseline scenario would be the use of fossil fuels for meeting similar thermal energy needs. As tabulated below and described in the approved Standardized Baseline for Institutional Cook Stoves in Uganda (version 01.0), it is evident that biomass used on three stone and to a minor extent on traditional metal stoves is the predominant energy source for cooking in institutional setups. As per the published literature, the depletion of forests over the years indicates the high fraction of non-renewable biomass.

[17] Use of non-renewable biomass can be demonstrated when there is a depletion of biomass stock in forests or a reduction of forest coverage, which means that there has been an unsustainable use of the biomass resources. In Uganda, according to Global Forest Resource Assessment 2010, biomass stock from forests (above-ground biomass) decreased from 287 million tonnes since 31 December 1989 to only 182.2 million tonnes in 2010.

Therefore, in accordance with AMS-II.G, the baseline scenario would be the use of fossil fuels to meet similar thermal energy needs as those provided by the project devices. Emission reductions are calculated by multiplying the thermal energy savings from non-renewable biomass consumption with an emission factor for fossil fuels.

Identified Baseline
As per the Uganda National Communication (National Communication, 2002), the energy sector is predominantly dependent on wood fuel, which accounts for up to 93% of the countries total energy needs. The high demand for fuel wood has resulted into depletion of forests leading to land degradation. The other sources of energy are petroleum and hydroelectricity accounting for 5% and 1.5% respectively. The hydroelectricity will primarily cater to electricity requirements in country. The fuel combustion breakdown in the country establishes that approximately 88% of the fuel is used in transportation and residential sector, leaving marginal quantities of fuel to be used for commercial / institutional setups. A recent paper, mentions that biomass contributes 90% of the energy needs for institutional setups and commercial buildings. (A Review of the Energy Situation in Uganda, 2014). Another publication from the Ministry of Education and[18] (2013) mentions that the most prevalent form of cooking fuel in the schools of Uganda is wood with 96% of the schools using it as their main cooking fuel, followed by charcoal with 4% of the schools. Use of non-renewable biomass can be demonstrated when there is a depletion of biomass stock in forests or a reduction of forest coverage, which means that there has been an unsustainable use of the biomass resources. In Uganda, during the period 1990 to 2010 the extent of forest decreased from 4.751 million hectares to 2.988 million hectares. Also, the carbon stock in living forest biomass decreased from 171 million tonnes to 109 million tonnes. (Global Forest Resources Assessment, 2010)[19]

B.5. Demonstration of additionality

The table below is only applicable if the proposed project activity is a type of project activity which is deemed automatically additional, as defined by the applied approved methodology, tool, standardized baseline or specific renewable technologies/measures conferring automatic additional microscale CDM project activities proposed by a DNA and approved by the Board.

Specify the methodology, tool, standardized baseline or specific renewable technologies/measures conferring automatic additional microscale CDM project activities proposed by DNAs and approved by the Board, that establish automatic additionality for the proposed project activity (including the version number and the specific paragraph, if applicable).	Methodological tool for demonstration of additionality of small-scale project activities, version 10, paragraph 11(c) Standarised Baseline for Institutional Cook Stoves in Uganda (version 01.0)

[18] http://www.education.go.ug/files/downloads/Abstract_2013.pdf

[19] http://www.fao.org/docrep/013/i1757e/i1757e.pdf

Describe how the proposed project activity meets the criteria for automatic additionality in the relevant methodology, tool, standardized baselines or specific renewable technologies/measures conferring automatic additional microscale CDM project activities proposed by a DNA and approved by the Board.	The IICS fall under the project category in paragraph 11(c) of the "Tool for demonstration of additionality of small-scale project activities" stating that "*Project activities solely composed of isolated units where the users of the technology /measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the small-scale CDM thresholds",* and therefore do not need to provide documentation to demonstrate additionality. IICS disseminated by this project activity are isolated units; the users in this specific case are institutions such as schools, prisons, hospitals. The size of each unit is not larger than 5% of the SSC CDM threshold, which is equivalent to 9 GWh_{th}. The same has been demonstrated in tab 'Debundling and Additionality'/ER calculation excel spreadsheet and PP will ensure that this threshold will be respected for each IICS disseminated to institutions as part of the project activity.

Prior CDM Consideration

The requirement of paragraph 8 of the Project Cycle Procedure, version 09, which states:

"For project activities with a start date on or after 2 August 2008, the project participants shall notify the designated national authority (DNA) of the host Party of the project activity, if the DNA exists, and the secretariat in writing of the commencement of the project activity and their intention to seek the CDM status within 180 days of the start date of the project activity".

The start date of the project is 26/03/2016. Considering the above requirement, we have notified along with the filled CDM project activity prior consideration form (Version 03.0) the UNFCCC and DNA on 19/09/2016[20] (resent the notification on 26/09/2016), which is within 180 days of the project start date. The email evidence about this notification has been submitted to the DOE. UNFCCC confirmed in an Email dated 26/09/2016 that the project information had been published by UNFCCC to the prior consideration of the CDM list at https://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html

B.6. Emission reductions

B.6.1. Explanation of methodological choices

The IICS disseminated in the project activity are appliances with different saucepan capacities, for efficiency improvements in the thermal application of non-renewable biomass. It is assumed that in the absence of the project activity, in accordance with AMS-II.G, the baseline scenario would be the use of fossil fuels for meeting similar thermal energy needs.

According to the applied methodology, emission reductions would be calculated as per the following equation.

Please note that the calculation of emission reductions is based on the number of individuals served (in the case of a school based on the average number of children attending on a day and boarding basis, and including the number of staff also working in the school) instead of number of

[20] The initial notification provided by the PP had wrongly ticked the box "Is this Notification of progress?". Notification of progress should only be ticked if the Initial prior consideration has already been submitted and published, which is not the case for this project activity.

project devices. This is also due to the fact that B_{old} values in the standardized baseline ASB0016 are provided in tonnes/person/year.

$$ERy,i = By,savings,i \times Ny,i \times \mu_y \times fNRB,y \times NCVbiomass \times EFprojected\_fossilfuel * t_{fraction,i} - LEy$$

Where:
$By,savings,i$ = Quantity of woody biomass that is saved per person in year *y* (calculated value)

Ny,i = Number of individuals served in year y

μ_y = Adjustment to account for any continued use of pre-project devices during the year y when applying equations 6 and 8 of the methodology (fraction). Use 1.0 in other cases

$fNRB,y$ = Fraction of woody biomass saved by the project activity in year *y* that can be established as non-renewable biomass using survey methods or government data or default country specific fraction of non-renewable woody biomass (fNRB) values available on the CDM website[21] The parameter value may be fixed ex ante at the beginning of each crediting period (default value 82%)

$NCVbiomass$ = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne)

$EFprojected\_fossilfuel$ = Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers[22]. Use a value of 81.6 t CO2/TJ

$t_{fraction,I}$ = Fraction of the days in use in year y of the IICS installed

LEy = Leakage emissions in the year *y*

Either of the following two options will be used for calculating $By,savings,i$ in woody biomass:

- Option 3: Water Boiling Test (WBT) as per paragraph 20 of the methodology

$$B_{y,savings,i} = B_{old,i} \times (1 - \eta old / \eta new,i)$$

Where:
$B_{old,i}$ = Annual quantity of woody biomass that would have been used per person in the school/institution in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices

ηold = Efficiency of the baseline system/s being replaced by project devices of type i.

[21] Default values endorsed by designated national authorities and approved by the Board are available at <http://cdm.unfccc.int/DNA/fNRB/index.html>.

[22] This value represents the emission factor of the substitution fuels likely to be used by similar users, on a weighted average basis. It is assumed that the mix of present and future fuels used would consist of a solid fossil fuel (lowest in the ladder of fuel choices), a liquid fossil fuel (represents a progression over solid fuel in the ladder of fuel use choices) and a gaseous fuel (represents a progression over liquid fuel in the ladder of fuel use choices). Thus a 50 per cent weight is assigned to coal as the alternative solid fossil fuel (96 t CO2/TJ) and a 25 per cent weight is assigned to both liquid and gaseous fuels (71.5 t CO2/TJ for kerosene and 63.0 t CO2/TJ for liquefied petroleum gas (LPG).

$\eta_{new,i}$ = Efficiency of the system being deployed as part do the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use weighted average values if more than one type of system is being introduced by the project activity

- Option 2: Kitchen performance test (KPT) as per paragraph 19 of the methodology

$B_{y,savings,i} = B_{old,i} - B_{new,KPT,i,p}$

Where:

$B_{new,KPT,i,\mathrm{p}}$: Annual quantity of woody biomass used in tonnes per person in the respective institution in the project scenario, measured as per the KPT protocol.

$B_{new,KPT,i,\mathrm{p}}$ is calculated through the following formula:

$B_{new,KPT,i,\mathrm{p}} = B_{new,KPT,i} \;/\; N_{y,\mathrm{inst}}$

Where:
$B_{new,KPT,i}$: Annual quantity of woody biomass used in tonnes on project and pre-project devices in the institution
$N_{y,\mathrm{inst}}$: Number of people in the school/institution in year y

Since the biomass consumption ($B_{old,i}$) is presented on a per capita basis, therefore the computation for emission reductions is based on the population served instead of number of IICS. In other words, the parameter $N_{y,i}$ is interpreted as population served (e.g. number of children and staff served in a school/institution). The estimated number of persons served per device used for the ex-ante ER calculation was determined by calculating the average of the actual number of population enrolled in the school/institution and the actual number of staff (teachers and non-teachers) at 24 schools included so far under the project activity. Since actual data of these 24 institutions is available, no survey was needed.

Being a project targeting schools and other institutions and to be in line with the Standarised Baseline for Institutional Cook Stoves in Uganda, version 01, $B_{old,i}$ is determined on a per capita basis and further denominated as $B_{old,p}$.

The values of $B_{old,p}$ for various schools and institutions are shown in the table 1 below and are taken from the approved standardized baseline ASB0016: Institutional Cook Stoves in Uganda.

Institution Type	Value of $B_{old,\mathrm{p}}$ (tonnes/person/year
Boarding Schools	0.38
Day Schools	0.19
Prisons, Plantation Estates and Hospitals	0.59

In case of PP using option 3 (WBT), the loss of efficiency in the IICS *i* in each batch *j* due to aging shall be accounted during the monitoring period y using the following option proposed in paragraph 25 of the methodology:

Determine the rate of efficiency drop for a representative sample of the first batch of IICS *i* in year *y* and assume that same rate of loss in efficiency applies to all other batches. In other words, it may

be assumed that the degradation of efficiency measured in a representative sample of the first batch of project devices i apply to all subsequent batches. The efficiency of the IICS in the first batch will be monitored annually through representative samples and this rate of loss in efficiency may be applied correspondingly to all batches.

In case of PP using option 2 (KPT), any potential efficiency loss is reflected in increased fuel consumption (if any) to be determined at annual kitchen performance tests on the project and pre-project devices of sampled institutions.

In order to account for leakage, $B_{y,savings,i}$ will be multiplied by a net to gross adjustment factor of 0.95 in line with paragraph 32 of the methodology. Hence no surveys in regards to leakage are required.

Leakage as per paragraph 33 is not applicable to the project activity. No devices currently being utilised outside the project boundary are transferred to the project activity. As mentioned in sections A.1, A.3 and B.4, biomass is predominantly used for cooking on three stone fire or traditional metal stoves. Since three stone fire is abundantly and available for free and traditional inefficient metal stoves can be easily and cheaply purchased, there is no reason why those devices should come from outside of the project boundary where they are currently used.

Paragraph 22 of the methodology is not applicable since the same is only relevant for projects having more than one device in households. Since the given project activity however targets schools and other institutions, and ER calculation is based on the number of people served in a school/ institution and not on the number of stoves, the paragraph is not applicable.

B.6.2. Data and parameters fixed ex ante

Data / Parameter	**$B_{old,p}$**
Unit	Tonnes/person/year
Description	Annual quantity of woody biomass that would have been used per person in the school/institution in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices
Source of data	Standardized baseline ASB0016 'Institutional cook stoves in Uganda', version 01.0
Value(s) applied	Boarding schools: 0.38 Day schools: 0.19 Prisons, plantation estates and hospitals: 0.59
Choice of data or Measurement methods and procedures	Default values as per ASB0016
Purpose of data	Calculation of baseline emissions
Additional comment	

Data / Parameter	**$f_{NRB,y}$**
Unit	Fraction
Description	Fraction of woody biomass saved by the project activity in the year y that can be established as non-renewable biomass
Source of data	https://cdm.unfccc.int/DNA/fNRB/index.html and Standardised Baseline for Institutional Cook Stove in Uganda (version 01.0)
Value(s) applied	0.82
Choice of data or Measurement methods and procedures	Default values as per https://cdm.unfccc.int/DNA/fNRB/index.html

Purpose of data	Calculation of baseline emissions
Additional comment	

Data / Parameter	**NCV** biomass
Unit	TJ/tonne
Description	Net calorific value of the non-renewable woody biomass that is substituted
Source of data	IPCC default 2006 (volume 2, chapter 1, Table 1.2)
Value(s) applied	0.0156
Choice of data or Measurement methods and procedures	IPCC Default value
Purpose of data	Calculation of baseline emissions
Additional comment	

Data / Parameter	**EF**projected fossil-fuel
Unit	tCO2/TJ
Description	Emission factor for the substitution of non-renewable woody biomass by similar consumers
Source of data	IPCC
Value(s) applied	81.6
Choice of data or Measurement methods and procedures	Default value in accordance with paragraph 15 of AMS-II.G (version 08)
Purpose of data	Calculation of baseline emissions
Additional comment	As per AMS-II.G

Data / Parameter	LEy
Unit	Factor
Description	Net to gross adjustment factor to account for leakage
Source of data	AMS-II.G (version 08), paragraph 32
Value(s) applied	0.95
Choice of data or Measurement methods and procedures	Default value in accordance with proposed value for multiplying $By, savings, i$ by a net gross adjustment value
Purpose of data	To reduce the need for surveys
Additional comment	

Data / Parameter	ηold
Unit	Fraction
Description	Efficiency of the baseline appliance being replaced
Source of data	Standardised Baseline for Institutional Cook Stoves in Uganda (version 01.0)
Value(s) applied	0.12
Choice of data or Measurement methods and procedures	Default value according to the Standardised Baseline, ASB0016: Institutional Cook Stoves in Uganda (version 01.0)
Purpose of data	Calculation of baseline emissions
Additional comment	

B.6.3. Ex ante calculation of emission reductions

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The calculation of emission reductions is based on an individual institution based on the number of individuals served. In the case of a school based on the average number of children attending on a day and boarding basis, and including the number of staff also working in the school.

The example calculation below is shown for one school and assuming that all traditional stoves have been replaced with IICS and that 100% of the project devices are used. The sum of the emission reductions of all IICS installed and the population served results in the total emission reduction achieved within a specific monitoring period.

According to the applied methodology, emission reductions would be calculated as follows:

$$ERy,i = By,savings,i \times Ny,i \times \mu_y \times fNRB,y \times NCVbiomass \times EFprojected\_fossilfuel \times t_{fraction,i} - LEy$$

Where:

$By,savings,i$ = Quantity of woody biomass that is saved in tonnes per person in year *y*

Ny,i = Population served (calculated on a per capita basis)

μ_y = Adjustment to account for any continued use of pre-project device during the year y when applying equations 6 and 8 of the methodology (fraction). Use 1.0 in other cases

$fNRB,y$ = Fraction of woody biomass saved by the project activity in year *y.*

$NCVbiomass$ = Net calorific value of the non-renewable woody biomass that is substituted.

$EFprojected\_fossilfuel$ = Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers.

$t_{fraction,i}$ = Fraction of the days in use in year y of the IICS installed

LEy = Leakage emissions in the year *y*

Example calculation for a school (Gangu Muslim Primary School) using option 3 (WBT) for calculating $By,savings$:

$$By,savings,i = Bold,i \times (1 - \eta\, old,i/\eta new,i)$$

Where:

$Bold,i$ = Annual quantity of woody biomass that would have been used per person in the school/institution in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices

ηold = Efficiency of the baseline system/s being replaced by project devices of type i.

$\eta new,i$ = Efficiency of the system being deployed as part do the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol.

Parameter	Unit	Value	Description
By,savings,i	t/person/year	0.2160	Fuel savings in tonnes of woody biomass per person per year (boarding school)
		0.11	Fuel savings in tonnes of woody biomass per person per year (day school)
Bold	t/person/year	0.38	Quantity of woody biomass used in the baseline in boarding school (value taken from ASB0016)
	t/person/year	0.19	Quantity of woody biomass used in the baseline in day school (value taken from ASB0016)
η_{old}	%	12	Baseline stove efficiency (value taken from ASB0016)
$\eta_{new,i}$	%	27.8	WBT result on Ugastove IICS (30 l) efficiency year 1
		27.02	Efficiency year 2 taking into account loss in efficiency
Ny,i	Number of individuals served	600	Number of children served in Boarding School (Gangu Muslim Primary School)
		993	Number of children + school staff served in Day School[23] (Gangu Muslim Primary School)
μ_y	Fraction	1.0	Adjustment to account for any continued use of pre-project device – Ex-ante assumption
fNRB	Fraction	0.82	Default value for Uganda
$NCV_{biomass}$	TJ/tonne	0.0156	Net calorific value wood (IPCC default value)
$EF_{projected\ fossil\ fuel}$	tCO2e/TJ	81.6	Default value AMS-II.G
U_{inst}	Yes/No	1	Ex-ante assumption that IICS are used 1 = in use 0 = not in use
$t_{fraction,i}$	Fraction	1	Ex-ante assumption that IICS in school was in use for the whole school year comprising of 236 days
Leakage	Fraction	0.95	Default value AMS-II.G
ER (boarding school)	tCO2e	128.52	Calculated value
ER (day school)	tCO2e	108.32	Calculated value

$$\boldsymbol{By,savings}\ \textbf{(boarding school)} = 0.38\ \mathbf{x}\ (1 - \boldsymbol{\eta} old/\boldsymbol{\eta} new,i) = 0.2160\ \text{t/person/year}$$

By,savings (day school) = 0.19 x (1-0.12/0.278) = 0.11 t/person/year

Emission reductions in year 1:

$\boldsymbol{ER1,i}$ **(boarding school) =** (0.2160 x 600 *x 1 x* 0.82 x 0.0156 x 81.6 x 1) * 0.95 = 128.52 tCO2e

$\boldsymbol{ER1,i}$ **(day school) =** (0.11 x 993 x 1 x 0.82 x 0.0156 x 81.6 x 1) * 0.95 = 108.32 tCO2e

[23] The staff was fully allocated to the day school. Though staff is also employed at the boarding school, the approach is conservative since Bold value in day school is lower than the one at boarding school. For monitoring purposes, PP may allocate the staff to both boarding and day school according to the real situation found at the institution.

The example calculation for a school using option 2 (KPT) would be as per the table presented above using option 3 (WBT), with modifications to the calculation of $B_{y,savings}$ using the following formula:

$$B_{y,savings,i} = B_{old,i} - B_{new,KPT,i,p}$$

Where:

$B_{new,KPT,i,\mathrm{p}}$: Annual quantity of woody biomass used in tonnes per person in the respective institution in the project scenario, measured as per the KPT protocol.

$B_{new,KPT,i,\mathrm{p}}$ is calculated through the following formula:

$$B_{new,KPT,i,\mathrm{p}} = B_{new,KPT,i} \;/\; N_{y,\mathrm{inst}}$$

Where:
$B_{new,KPT,i}$: Annual quantity of woody biomass used in tonnes on project and pre-project devices in the institution
$N_{y,\mathrm{inst}}$: Number of people in the school/institution in year y

B.6.4. Summary of ex ante estimates of emission reductions

Year	Baseline emissions (t CO_2e)	Project emissions (t CO_2e)	Leakage (t CO_2e)	Emission reductions (t CO_2e)
Year 1: 01/03/2017 – 28/02/2018	9,544	0	0	9,544
Year 2: 01/03/2018 – 28/02/2019	37,340	0	0	37,340
Year 3: 01/03/2019 – 2902/2020	36,453	0	0	36,453
Year 4: 01/03/2020 – 28/02/2021	35,487	0	0	35,487
Year 5: 01/03/2021 – 28/02/2022	34,485	0	0	34,485
Year 6: 01/03/2022 – 28/02/2023	33,417	0	0	33,417
Year 7: 01/03/2023 – 29/02/2024	32,277	0	0	32,277
Total	219,003	0	0	219,003
Total number of crediting years	7 years			
Annual average over the crediting period	31,286			

B.7. Monitoring plan

The monitoring plan describes how to collect, assess and archive all relevant data to be monitored according to the methodology. Data from the monitoring procedures will be recorded in the electronic project database and summarised in the Monitoring Report.

The monitoring plan consists of:

- Monitoring concept
- Monitoring requirements and procedures for replacement of traditional stoves
- Monitoring requirements and procedures for efficiency or fuel consumption (depending on which option is chosen for calculating $B_{y,savings}$) of IICS
- Data collection
- Data archiving
- Training
- Quality Assurance/Quality Control Procedures
- Monitoring Report
- Monitoring responsibilities
- Parameters to be monitored

Monitoring concept

Simoshi will be responsible for the collection of all Sales Agreement data, for internally verifying the information in the Sales Agreements, and the creation of the Monitoring Report at the end of each Monitoring Period. Simoshi will be responsible for data entry into the Sales Records and for ensuring that the information in the Sales Agreements is complete and correct. The total amount of Sales Agreements will reveal the quantity of IICS sold and schools and institutions included at the end of a Monitoring Period. The electronic database will record the start and end dates of each selling year y for each IICS (t fraction), and be used to calculate the emission reductions attributable to each Monitoring Period. Appropriate record keeping procedures will be implemented to ensure that each Monitoring Period dataset can be transparently attributed to the project activity, preventing any occurrences of double-counting. Hence, the project database will keep records on the duration of previous Monitoring Periods, the school/institution surveys, and verification activities. The monitoring sampling will be tracked through the project activity's electronic database that consolidates the Sales Records.

In order to account for drop-off in use (U)[24] and continued use of pre-project devices, the IICS deployed will be monitored through systematic verification. Monitoring may include a combination of the following activities or events:

(a) an annual maintenance/repair event
(b) customer inspections resulting from loan or hire purchase agreements
(c) double verified records of Simoshi's monitoring staff
(d) collection of population served in each school/institution three times per year
(e) training of kitchen staff on the appropriate use of the IICS following the "Kitchen Management Technique"
(f) information collection on a quarterly basis of cooking appliances used by the school/institution in the "Kitchen Information Update" form

In general, a cohort is defined as the year that an IICS model is sold in or gone through maintenance in the same year.

Cohorts of IICS that are older than the expected normal lifetime of the IICS may or may not be included in the monitoring, and accordingly regarded in the calculation of emission reductions. For example, the Ugastove portable firewood IICS has got a 10-year lifetime[25]. After its 10 years of use

[24] See AMS-II.G., 6.1, table 8

[25] The same has been confirmed by the manufacturer of the IICS. The confirmation letter has been presented to the DOE during validation.

from the time of the IICS's commissioning date, Simoshi will assess whether the IICS will go through a complete overhaul to continue being used under the same serial number, or will be completely replaced with a new IICS.

Concerning the sampling of IICS for the efficiency (in case that WBT is chosen) or fuel consumption (in case that KPT is chosen), please see section B.7.2 for more details.

Requirements for replacement of traditional stoves[26]
Monitoring shall ensure that either the replaced low efficiency appliances are disposed of and are not used or found in the kitchen environment within the boundary or within the region.

Monitoring procedures
It will be checked if replaced low efficiency appliances have been dismantled and are no longer in use by the schools/institutions within the project boundary.

During usage surveys, if evidence of use of traditional cooking appliances is found in schools/institutions that have purchased an IICS only during peak cooking needs (e.g. for celebrations) then it can be assumed that there is no adjustment needed because the baseline study is performed in schools/institutions during normal cooking conditions and data from peak cooking has not been taken into account in the B_{old} calculations.

If evidence of use of traditional cooking appliances is found in schools/institutions during normal cooking needs, then adjustment for that school/institution will be estimated on the basis of an interview to conservatively estimate the fraction of time in which the IICS and traditional cooking appliances are in use. The total adjustment for the project activity will be based on the census and statistics described in the monitoring concept and its annexes.

Monitoring procedures for efficiency or fuel consumption of IICS
Depending on which option for calculating By,savings the PP will choose, either annual WBT or KPT will be conducted.

If following the WBT option, PP will follow the simplified approach when the IICS are produced by a manufacturer with a good quality management system in place to ensure that the individual equipment produced does not vary beyond the range of acceptance limits (e.g. characteristics such as materials, critical dimensions). The manufacturer and/or PP would conduct sample tests on three cookstoves with three tests conducted for each stove.[27] It would be ensured that the sample test results meet a 90/10 confidence/precision. WBTs would be carried out on 30 litres IICS capacity.

If the manufacturer cannot ensure a good quality management system, then WBTs would be carried out by a national standards body or an appropriate certifying agent recognized by that body or alternatively manufacturer's specifications would be used. The sample test results would have to meet a 90/10 confidence/precision.

PP will carry out WBTs on 30 litres IICS capacity and apply conservatively the resulted thermal efficiency across all IICS sizes.[28] The SSC WG considered that applying the lowest efficiency found in IICS with saucepan capacities of 30 litres for IICS with saucepan capacities larger than 30 litres would be a conservative approach when the IICS designs and maintenance practices are comparable.

[26] AMS II.G., 6.1., table 9

[27] This is in line with the response given from the SSG WG to Request for Clarification SSC_726.

[28] This is in line with the response given from the SSG WG to Request for Clarification SSC_725.

The thermal efficiency of IICS with 30 litres saucepan capacity in the first batch would be used for annual efficiency monitoring as specified in option (c) of paragraph 25 and the result would be applied across all IICS sizes.

For either options described above, Simoshi will ensure that IICS models from the selected IICS manufacturers are of similar design, following Simoshi's Quality Assurance and Quality Control Manual (which includes consistency in manufacturing practices and materials used) and Simoshi's Maintenance Manual that demonstrates comparable maintenance and repair practices on all IICS included under the project activity.

If the project was to implement in-situ constructed IICS, it would be ensured that prefabricated components would be sourced from the same supplier as requested in footnote 2 of the Request for Clarification SSC 725.

If following the KPT option, PP would conduct annually kitchen performance tests (KPT) on project and pre-project devices of sampled institutions following the national standard (if available) or the KPT procedures specified by PCIA[29]. The fuel consumption of institutions is determined through a field test taking into account real-institutional settings. The fuel consumption of the institution is then divided by the number of people served in the institution to arrive at the fuel consumption per person per year in the institution. The fuel consumption per person per year is then subtracted from B_{old} to calculate By,savings.

Data collection
Simoshi will collect the data necessary for the monitoring and for the emission reductions calculation. Data will be managed through an electronic database that can directly attribute the data to each school/institution, thereby allowing unambiguous determination of the emission reductions attributable to the project activity.

Data archiving
Sales Agreements will be stored by Simoshi. A back-up of the project database will also be stored on an electronic medium by Simoshi. All data monitored and required for verification and issuance will be kept for at least two years after the end of the crediting period or the last issuance of CERs for the project activity, whichever is later.

Training
Simoshi will provide the necessary training to its staff and the parties involved in the monitoring to ensure that the data recorded is complete and accurate. This monitoring training will be provided by Simoshi, and also to the monitoring and testing groups before the Monitoring Period exercises start.

Quality Assurance/Quality Control Procedures
Different quality control and quality assurance measures will be put in place by Simoshi to ensure that all emission reductions are real. Surveys and testing will be carried out and Simoshi will check the consistency of the results. Simoshi will ensure that the studies are accurate and that a conservative approach has been taken.

Sales Agreements will be checked at two levels by Simoshi's project officer and Simoshi's data clerk, and missing or wrong data will be corrected wherever possible. In cases where it is not possible, any mandatory missing data will automatically invalidate that IICS and the *t fraction* will be counted as zero, resulting in no emission reductions being generated by that appliance. Wrong data entered in the Sales Agreement that lead to an inability to track IICS during monitoring will result in a lower usage rate. However in cases where the IICS can be traced, and missing information can be corrected, the new data will be updated in the electronic Sales Record.

[29] http://www.pciaonline.org/node/1049

Monitoring Report
Simoshi will assess all monitoring data and produce a Monitoring Report corresponding to the preceding Monitoring Period for the DOE to verify. This report will present the data relating to the emission reductions generated by the project activity during the Monitoring Period.

Generally, the Monitoring Report will use the current CDM Monitoring Report Form and follow the current "Guidelines for completing the Monitoring Report Form".

Monitoring Responsibilities
Simoshi is in charge of supervising all the monitoring activities through its managing director and will have the direct responsibility for all the monitoring activities, including data collection, data monitoring, and writing the Monitoring Report.

B.7.1. Data and parameters to be monitored

Data / Parameter	$\eta_{new,i,j}$
Data unit	Fraction
Description	Efficiency of the IICS of each type i and batch j being deployed as part of the project activity
Source of data	WBT reports
Value(s) applied	27.8% (30 l Ugastove IICS) used for ex-ante estimation[30] Efficiency loss in efficiency has been taken into account for ex-ante estimation (for details, please see ER calculation excel spreadsheet)
Measurement methods and procedures	Efficiency shall be measured/estimated as per the following: 1. Manufacturer specifications on efficiency based on water boiling test (WBT) may be used. The sampling test of stoves by such certification bodies/agents or manufacturers shall be conducted following a 90/10 precision in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities" 2. However, the following simplified approach may be used, when the IICS are produced by a manufacturer with a good quality management system in place to ensure that the individual equipment produced do not vary beyond the range of acceptance limits (e.g. characteristics such as materials, critical dimensions): (i) Conduct a sample test on three IICS with three tests conducted for each IICS; (ii) If the standard deviation of the nine test results indicated above is very small and 90/10 precision requirement is met (in this case, the value of the t-distribution for 90 per cent confidence shall be used instead of Z value), the efficiency determined is acceptable, otherwise more sample tests would be required until 90/10 precision is met
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	Calculation of emission reductions
Additional comment	Only applicable in case of option 3 (paragraph 20 of the meth.) for calculating By,savings

Data / Parameter	$B_{new,KPT,i}$
Data unit	tonnes

[30] Using the thermal efficiency of the 30 l size for the ex-ante ER calculation is deemed to be plausible and conservative, since literature and 3rd party experience indicate that efficiency increases by increasing the saucepan capacities (for further details, please see Request for Clarification SSC_725)

Description	Annual quantity of woody biomass used in tonnes on project and pre-project devices in the school/institution
Source of data	Sample survey
Value(s) applied	Not applicable for ex-ante estimation since ex-ante estimation is based on option 3 (WBT)
Measurement methods and procedures	Measured as per the KPT protocol, for the initial efficiency determined in the year of its commissioning. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the partnership for clean indoor air (PCIA): http://www.pciaonline.org/node/1049)
Monitoring frequency	Annual monitoring of the quantity of woody biomass used in tonnes on project and pre-project devices in the school/institution
QA/QC procedures	--
Purpose of data	Calculation of emission reductions
Additional comment	Only applicable in case of option 2 (paragraph 19 of the meth.) for calculating By,savings

Data / Parameter	$t_{fraction\ i}$
Data unit	Fraction of 365 for Institutions Fraction of 236 for Schools
Description	Fraction of the days in use in year y of the IICS installed
Source of data	Derived from sales records
Value(s) applied	1 (for ex-ante ER estimation)
Measurement methods and procedures	Simoshi keeps a paper and electronic record of the sales date, and the IICS is considered to be in use from the commissioning date, which is the date on which the IICS is put into use for the first time. **t**fraction,i is calculated by the number of days the IICS is in use in the respective year divided by 236 (in case of schools) and 365 (for any other institution). The number of operational IICS each year will be summarised in a table and justified by comparing the efficiency savings of each school and the project activity's scale limit of savings of 180 GWhth per year. This factor will be calculated through the electronic database
Monitoring frequency	Continuously (reported annually)
QA/QC procedures	Sales records are stored by Simoshi as physical evidence and in an electronic database where the information of each IICS and school/institution is recorded. Every three months, Simoshi will monitor all sold IICS during the month through physical inspection/verification monitoring events. These monitoring events include a combination of the following activities or events: (a) School/institution inspections resulting from the collection of payments from credit agreements (b) Inspection of IICS to ensure the IICS are performing in optimal manner (c) Training of kitchen staff to ensure the IICS are operated in optimal manner following Simoshi's "Kitchen Management Techniques" (d) Collection of number of children/staff annually enrolled in schools/institutions
Purpose of data	Calculation of baseline emissions
Additional comment	For ex-ante ER calculation, it was assumed that the IICS are in use for the whole year, hence fraction was assumed to be equal to 1.

Data / Parameter	**Date of commissioning of project device i**
Data unit	Date
Description	Actual date of commissioning of the project device
Source of data	Sales records/electronic database
Value(s) applied	Monitored parameter

Measurement methods and procedures	Simoshi keeps a paper and electronic record of the sales date, and the IICS is considered to be in use from the commissioning date, which is the date on which the IICS is put into use for the first time. Simoshi conducts a training session when IICS are deployed, support sessions thereafter within the same week, and completes the date in the Sales Agreement and its database to confirm when the IICS has been put in use.
Monitoring frequency	Continuously (reported annually)
QA/QC procedures	Simoshi completes the commissioning date in the Sales Agreement and its database that confirms when the IICS has been put in use. The commissioning date is provided b the kitchen staff and the institution officials as of when they agree to put the IICS in use. Simoshi confirms this date is true through an on-site visit.
Purpose of data	The date of commissioning of project device i will be used to determine the fraction of the days in use in year y of the IICS installed
Additional comment	No categorization of institutions/IICS in batches and ER will be calculated for each institution separately. ER credits are claimed from the commissioning date onwards, however earliest with the registration date of the project at UNFCCC.

Data / Parameter	$N_{y,\text{inst}}$
Data unit	Number of people in the school/institution in year y
Description	Number of people in the school/institution that consume food cooked by IICS
Source of data	Derived from records collected from the school/institution
Value(s) applied	756 (used for ex-ante calculation)
Measurement methods and procedures	Simoshi annually collects three times a year the population enrolled in the school/institution and the number of staff (teachers and non-teachers) applicable to the consumption of food cooked in the school/institution kitchen. To determine the number of people in the school/institution in year y, the average of the quarterly figures throughout the year will be taken.
Monitoring frequency	Three times a year
QA/QC procedures	The form “Term Information Update” is completed for each school/institution three times per year and contains the detailed information of number of people attending, type (day or boarding) and it is signed and officially stamped by the school/institution. The average of the information in the three ‘Term Information Update’ sheets of the respective year will be taken for the number of people in the school/institution in year y.
Purpose of data	Calculation of emission reductions
Additional comment	The estimated number of persons served per device used for the ex-ante ER calculation was determined by calculating the average of the actual number of population enrolled in the school/institution and the actual number of staff (teachers and non-teachers) at 24 schools included so far under the project activity. Since actual data of these 24 institutions is available, no survey was needed.

Data / Parameter	μ_y
Data unit	Fraction
Description	Adjustment to account for any continued use of pre-project devices during the year y
Source of data	Monitoring/usage surveys
Value(s) applied	1.0 (for ex-ante calculation)

Measurement methods and procedures	Surveys will be conducted since the use of data loggers to record the continued operation of baseline devices is demonstrated to be not practical, taking into consideration that the baseline devices are usually three stone fires. The surveys will be designed in a way to capture the cooking habits and stove usage of institutions, including quantification of use of baseline devices, by formulating questions and/or collecting evidences to determine the frequency of usage of both the project devices and baseline devices. The information on any continued use of pre-project devices during the year y will be captured through quarterly data collection through the 'Kitchen Information Update'. An average of these quarterly results will be taken to determine the fraction of any continued use of pre-project devices during the year y.
Monitoring frequency	Quarterly
QA/QC procedures	Simoshi collects information in the form "Kitchen Information Update" from each school/institution on a quarterly basis to ensure that (i) all IICS are in use, (ii) the condition of the IICS and whether they need maintenance/repair, and (iii) no traditional stoves are seen in use.
Purpose of data	Calculation of emission reductions
Additional comment	Only applicable when equation 6 of the methodology is applied – in cases when applying the KPT option for calculating By,savings, it can be assumed to be 1.0.

Data / Parameter	$U_{y,inst}$
Data unit	Fraction
Description	Usage rate of stoves in institution in year y
Source of data	Usage surveys
Value(s) applied	1.0 (for ex-ante calculation)
Measurement methods and procedures	Measured directly through systematic usage surveys. It will be checked for all institutions if the project devices are in use or not. If the project devices are not found in use in any of the quarterly 'Kitchen Information Updates', the institution will be excluded from the emission reduction calculation accordingly for the respective year in which at least one of the four "Kitchen Information Updates" reported that the project devices were not being in use. This is conservative bearing in mind that even though the project devices might not have been found in use in one of the quarterly "Kitchen Information Updates", they might have been found in use (e.g. after repair) again in the subsequent Kitchen Information Update of the same year. In case that an institution does not use all of its project devices at the same time, but at least some of them (as minimum one IICS), the institution is counted as user.
Monitoring frequency	Quarterly
QA/QC procedures	Simoshi collects information in the form "Kitchen Information Update" from each school/institution on a quarterly basis to ensure that (i) all IICS are in use, (ii) the condition of the IICS and whether they need maintenance/repair, and (iii) no traditional stoves are seen in use. If a school/institution does not use all of its IICS, Simoshi will ask for the reasons and take immediate corrective actions (if needed) to repair or replace those IICS not in use.
Purpose of data	Calculation of emission reductions
Additional comment	

B.7.2. Sampling plan

>>

The project activity will conduct systematic verification for the usage rate and continued use of pre-project devices (in case that WBT option for calculating By,savings will be chosen), hence no sampling will be carried out and no categorization in batches is necessary in regards to these two parameters.

The only parameters which will be sampled in the project activity are either the thermal efficiency of the IICS (applicable if the WBT option is chosen) or the fuel consumption of project and pre-project devices (applicable if the KPT option is chosen).

The 'Standard for sampling and surveys for CDM project activities and programme of activities' (version 5, EB86, Annex 3) and Guideline on 'Sampling and surveys for CDM activities and programme of activities' will be followed (version 4, EB86, Annex 4).

Sampling design

Objectives and reliability requirements

Thermal efficiency of the project device (applicable in case PP chooses option 3 as per paragraph 20 of the methodology), $\eta_{new,i,j}$: The objective is to measure the thermal efficiency of the project IICS with a 90/10 confidence/precision. Tests will be carried out by a national standards body, an appropriate certifying agent recognized by that body or alternatively, manufacturer specifications on efficiency based on WBT will be used. In case that the simplified approach will be used (for details see section 6.1, table 11 of the methodology), test results shall meet the 90/10 confidence/precision requirement using the value of the t-distribution for 90% confidence instead of Z value. The tests will be conducted by the PP and/or manufacturer in this case.[31]

In order to account for efficiency loss, the PP will conduct sampling annually as per option c of paragraph 25).

Regardless of which option is selected, Simoshi will systematically conduct quality checks on its IICS orders to all participating IICS manufacturers, following the Quality Assurance and Quality Control Manual.

Fuel consumption (applicable in case PP chooses option 2 as per paragraph 19 of the methodology), $B_{new,KPT,i}$: The objective is to measure the fuel consumption of an institution taking into account all stoves (both project and pre-project devices) with a 90/10 confidence/precision. Sampling will be conducted annually on all project and pre-project devices of the sampled schools/institutions.

Target population

The target population are all schools/institutions with its respective IICS installed by the project activity. The primary means to uniquely identify the schools/institutions under the project activity is by means of buyer information collected through Sales Agreements and the unique numbering of each IICS. The sales data will be stored in the project activity's records in Simoshi's electronic database. The total number of IICS that are in use will be identified through either one or a combination of the following activities that will be stored in the monitoring database: The database will be continually updated with the following events: (a) an annual maintenance/repair event, (b) customer inspections resulting from loan or hire purchase agreements, (c) double verified records of Simoshi's monitoring staff, (d) collection of population served in each school/institution three times per year, (e) training of kitchen staff on the appropriate use of the IICS following the "Kitchen Management Technique", (f) information collection on a quarterly basis of cooking appliances used by the school/institution in the "Kitchen Information Update" form.

[31] This is in line with the response given from the SSG WG to Request for Clarification SSC_726.

Sampling method

Simple random sampling will be used.

In case of WBTs, schools/institutions of the first batch of IICS with 30 litres capacity will be randomly sampled with the aid of a computerised randomiser.

In case of KPTs, schools/institutions will be randomly selected and and fuel consumption of all pre-project and project devices in each sampled school/institution will be measured.

Sample size

The required sample size will be determined using simple random sampling. It will be ensured that the sample group is homogeneous (in regards to age, type etc.)

The equation for estimating the sample size for thermal efficiency (in case of not using the simplified approach) and fuel consumption (both are mean value parameters of interest) is:

$$n \geq \frac{1.645^2 NV}{(N-1)\times 0.1^2 + 1.645^2 V}$$

Where:

$$V = \left(\frac{SD}{mean}\right)^2$$

n = sample size
N = Number of schools/institutions of the first batch in case of WBTs (in case of KPTs there is no differentiation of batches)
Mean = expected mean
SD = expected standard deviation
1.645 = Represents the 90% confidence required

If the resulting sample size is less than 30, the Student's t-distribution shall be used as per paragraph 13 of the sampling standard.

In case that the sample does not comply with the necessary confidence/precision level, it will be ensured that additional samples will be taken. Alternatively, provisions like oversampling will be taken into account in order to compensate for any attrition, outliers or non-response and also to prevent a situation where the required reliability is not achieved and additional sampling efforts would be required.

In case that the thermal efficiency will be determined through the simplified approach (for details see section 6.1, table 11 of the methodology), a sample test on three IICS with three tests conducted for each IICS will be carried out. The test results shall meet the 90/10 confidence/precision requirement using the value of the t-distribution for 90% confidence instead of Z value, otherwise more sample tests will be conducted until 90/10 precision is met.

Sampling frame

In case of WBTs, the sampling frame consists of all schools/institutions and its corresponding IICS from the first batch. The first batch is defined as the first year (i.e. from 26/03/2016 [32] to 25/03/2017) in which schools/institutions were included in the project and IICS disseminated to those institutions[33]. The IICS disseminated in the period from 26/03/2016 to 25/03/2017 represent the first and oldest age group amongst the overall population. An institution which has been identified as non-user does not make part of the sampling frame.

In case of using WBTs, representative sample results from this first batch will be applied to all subsequent batches. The efficiency of the project devices of the school/institution of this first batch will be monitored annually through representative samples and the sampling results will be applied correspondingly to all subsequent batches.

In case of using KPTs, a representative sample of schools/institutions will be taken and fuel consumption of all pre-project and project devices in each sampled school/institution will be measured.

Data to be collected and implementation

Field measurements:

In the case of PP choosing the option of KPTs, PP will ensure that the time period for conducting the KPTs is conservative or demonstrate that fuel consumption is not subject to seasonal fluctuations. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the partnership for clean indoor air (PCIA): http://www.pciaonline.org/node/1049).

Quality assurance/Quality control:

Simoshi will ensure to provide the necessary training to staff involved in sampling and/or testing exercises or contract an independent third party with the necessary expertise. It will be guaranteed that instruments and equipment used for the WBT or KPT are calibrated to provide high quality measurements. Simoshi will conduct quality control checks to ensure that data measured and recorded are complete and accurate.

An outlier analysis following the interquartile range approach will be followed excluding outlier data if needed. The risk of non-response rate or schools/institutions not willing to participate in samples/tests is minimized due to the project design, i.e. continuous interaction taking place between Simoshi and schools/institutions and the institutional set-up, i.e. the probability of schools/institutions moving away is low. In case the sample does not comply with the necessary confidence/precision level, it will be ensured that additional samples will be taken. Alternatively, provisions like oversampling will be taken into account in order to compensate for any attrition, outliers or non-response and also to prevent a situation where the required reliability is not achieved and additional sampling efforts would be required.

Simoshi will conduct quality measures on IICS manufacturers to ensure that IICS are of the similar design and materials used irrespective of the saucepan capacity. Simoshi will ensure that participating IICS manufacturers follow the Quality Assurance and Quality Control Manual. Quality assurance and control systems are essential for Simoshi's monitoring activities and checks are performed on all IICS purchases by Simoshi's staff.

[32] 26/03/2016 is defined as the project start date, i.e. the date when the first stoves were disseminated to an institution.

[33] The 2nd batch will include institutions and IICS disseminated in the time period from 26/03/2017 to 25/03/2018, the 3rd batch will consist of the time period from 26/03/2018 to 25/03/2019 and so on.

Quality checks are also applied during maintenance events. All IICS are maintained on an annual basis, and comparable maintenance practices and repairs are ensured on all IICS, irrespective of the size, by following Simoshi's Maintenance Manual.

Analysis of data:

Project device efficiency data or fuel consumption data (depending on which option PP will choose) will be used for calculating By,savings. By,savings again will serve as input for the ER calculation of each school/institution taking into account the type of institution and the number of individuals served.

Implementation plan:

Simoshi will ensure that the staff or any independent third party involved in any sampling, survey or testing exercise have the necessary expertise, qualifications and experience to carry out the activities. Training will be conducted with the personnel involved in sampling, surveys and/or testing activities on how to properly deal with the techniques needed and how to reduce errors. Simoshi will ensure that there is no conflict of interest of any individual involved in any of the activities. Supporting documentation (like e.g. training certificates, participants lists, CVs) will be presented to the verifying DOE.

B.7.3. Other elements of monitoring plan

>> Not applicable

B.8. Date of completion of application of methodology and standardized baseline and contact information of responsible persons/ entities

>> 02/02/2017
Contact information:
Virginia Echavarria, Simoshi Limited, Email: virginia@simoshi.org, Phone: +256-(0)790 885 455
Johann Thaler, mkaarbon safari GmbH, consultant, johannfranz.thaler@gmail.com, Phone: +49-(0)152-03409356
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SECTION C. Duration and crediting period

C.1. Duration of project activity

C.1.1. Start date of project activity

The start date of the project activity is 26/03/2016, the date when the first institutional improved cook stove was sold.

C.1.2. Expected operational lifetime of project activity

21 years (3 x 7 years)

C.2. Crediting period of project activity

C.2.1. Type of crediting period

Renewable crediting period.

C.2.2. Start date of crediting period

The start date of the crediting period is 01/03/2017 or the date of project registration with UNFCCC, whichever is later.

C.2.3. Length of crediting period

The first crediting period is 7 years. The number of renewal periods is 2.

SECTION D. Environmental impacts

D.1. Analysis of environmental impacts

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Manufacturing Operation

In accordance with the national environmental regulations a project brief has to be approved for manufacturers of IICS. Simoshi is not involved in the manufacture of IICS and currently purchases the IICS form local manufacturers (although it might be involved in the future). Therefore Simoshi is not required to submit a project brief at this stage.[34]

Supply Chain/Operations

The supply chain and operation-related environmental impacts are expected to be minimal.

Disposal

Once the school/institution stopped using the IICS, Simoshi will evaluate if the IICS can be refurbished or if they need to be scrapped. In any of the two cases, Simoshi will be responsible for collecting the IICS from the school or institution, either taking them to the IICS manufacturer for refurbishment or having them scrapped.

Environmental Benefits:

- Human health: Children and mothers will be exposed to fewer air pollutants through reduced emission of not only CO2, but also carbon monoxide and particulate matter. Air pollution from cooking with solid fuel is a key risk factor for childhood pneumonia as well as many other respiratory, cardiovascular and ocular diseases.
- Biodiversity: will be improved as the programme reduces pressure on remaining forest reserves in Uganda, increasing not only the amount of biomass stocks, but preserving the otherwise deforested woody ecosystems. This will have positive effects on both the fauna and flora biodiversity of the wood collection areas

An environmental impact assessment is not required for IICS distribution activities. This is confirmed by the National Environment Management Authority Uganda (NEMA). The clearance letter issued by NEMA has been provided to the DOE during validation.

SECTION E. Local stakeholder consultation

E.1. Solicitation of comments from local stakeholders

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Stakeholders were invited to attend a public meeting in which the project activity was presented and discussed. Participants were taken through the do no harm assessment and conducted a sustainability assessment. Participants had the chance to ask questions and evaluate the project. A representative range of stakeholders were invited through different means (like Emails, telephone calls, SMS, newspaper announcement), including different institutions, stove

[34] Nevertheless, the project clearance letter issued by the National Environment Management Authority Uganda (NEMA) to Ugastove can be provided to the validating DOE upon request.

manufacturer, policy makers, NGOs. The meeting was held on 10 June 2015 at Hotel Triangle in Kampala, Uganda. The meeting was attended by 37 participants including 29 males and 8 females. See the participants' list in the following.

Job/Position in the Community	Male/Female	Organisation (if relevant)
Stove User	Male	Kirinya High School
Stove user	Male	Yalite S School & RDF
Stove User	Male	Stove User
Stove User	Male	Bright Angels Junior School Luzira
Representative	Female	Our Lady Parents School
Stove User	Male Male	St. Johns High Schools Kazo
Representative	Male	Kazo Hill College/St Johns HS
Representative	Male	Fountain Grammar School
Representative	Male	New Hope Kimbeja Jr. School
Stove User	Male	Agrarian Rural Institute
Representative	Female	Xclusive Cuttings
Representative	Male	Climate Change Dept. Ministry of Water and Environment
Executive Director	Male	C.R.I.P
Programme Coordinator	Male	African Leadership Institute
Director	Male	Agrarian Rural Institute
Representative	Male	MUNNO
Manager	Male	ACDIPE
Coordinator	Male	DATS
Marketeer	Male	Green World
Managing Partner	Male	Aduko Consulting Services
Managing Director	Female	Simoshi
General Manager	Female	Uganda Carbon Bureau – ICSEA
Deputy Director International Operations	Female	Panacea Educational Development (PED)
Director International Operations	Male	PED
Program Director	Male	PED
Technology Mentor	Male	GVEP International
Project Coordinator	Male	Contragen (u) Ltd
Director	Female	Agric and Biodiversity Conservation
Representative	Male	UCDF
Research Associate	Female	UNFCCC/RCC
Representative	Male	UMAH
CEO	Female	Ugastove Ltd
Represenattive	Male	Youth and the Environment
Director	Male	Energy
Technical Officer	Female	GIZ Energy Programme
Director	Male	AME
Director	Male	Prime Equipment &Co. Ltd

E.2. Summary of comments received

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A summary of the action items raised and Simoshi's response to these actions:

Issue	Simoshi's Response
Concern about the cost of the IICS	Carbon finance will be used to lower the cost of the IICS, making them more affordable.
Training on how to use the IICS	It will be ensured that training will be provided by the IICS installation team. In addition Simoshi will provide training during follow up and maintenance visits.
Concern about the geographical reach of the project	During the start up phase, the project will only be implemented in Kampala and Wakiso. However, the

	project will scale up to include other schools in future. The lessons learned during the start up phase will be useful for the scale up.
Corruption of the project	The project will ensure that safeguards against corruption are put in place for the project. All those that work contrary to these safeguards will be dealt with in accordance with the laws of Uganda.
Concern about the quality of the IICS	Simoshi will consistently test the IICS at accredited laboratories and provide annual maintenance to all IICS. Progressive disciplinary actions will be taken on suppliers that produce deficient IICS.

Details of comments received during the Local Stakeholder Consultation process are contained in the Local Stakeholder Consultation Report, which has been presented to the DOE during validation.

E.3. Report on consideration of comments received

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All comments received during the Local Stakeholder Consultation were reviewed and wherever possible incorporated into the design of the Project Design Document.

SECTION F. Approval and authorization

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Simoshi obtained the Letter of Approval from the DNA Uganda (Ministry of Water and Environment) issued on 04/01/2017.

Appendix 1. Contact information of project participants and responsible persons/ entities

Project participant and/or responsible person/ entity	☒ Project participant ☒ Responsible person/ entity for application of the selected methodology (ies) and, where applicable, the selected standardized baselines to the project activity
Organization name	Simoshi Limited
Street/P.O. Box	Lubowa Valley Estate
Building	Plot 5355, Block 273
City	Kampala
State/Region	Lubugumu, Wakiso District, Kyadondo County
Postcode	n/a
Country	Uganda
Telephone	+256 (0)780269834
Fax	
E-mail	Virginia@simoshi.org
Website	www.simoshi.org
Contact person	Virginia Echavarria
Title	Managing Director
Salutation	Ms.
Last name	Echavarria
Middle name	n/a
First name	Virginia
Department	n/a
Mobile	+256 (0)790885455
Direct fax	n/a
Direct tel.	+256 (0)780269834
Personal e-mail	Virginia@simoshi.org

Appendix 2. Affirmation regarding public funding

No further information, hence not applicable

Appendix 3. Applicability of methodology and standardized baseline

No further information, hence not applicable

Appendix 4. Further background information on ex ante calculation of emission reductions

No further information, hence not applicable

Appendix 5. Further background information on monitoring plan

No further information, hence not applicable

Appendix 6. Summary of post registration changes

No further information, not applicable

Document information

Version	*Date*	*Description*
08.0	22 July 2016	EB 90, Annex 2 Revision to include provisions related to automatically additional project activities.
07.0	15 April 2016	Revision to ensure consistency with the "Standard: Applicability of sectoral scopes" (CDM-EB88-A04-STAN) (version 01.0).
06.0	9 March 2015	Revisions to: • Include provisions related to statement on erroneous inclusion of a CPA; • Include provisions related to delayed submission of a monitoring plan; • Provisions related to local stakeholder consultation; • Provisions related to the Host Party; • Editorial improvement.
05.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the project design document form for small-scale CDM project activities (these instructions supersede the "Guidelines for completing the project design document form for small-scale CDM project activities" (Version 01.1)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for the application of the methodology (ies) to the project activity in B.7.4 and **Error! Reference source not found.**; • Change the reference number from *F-CDM-SSC-PDD* to *CDM-SSC-PDD-FORM*; • Editorial improvement.
04.1	11 April 2012	Editorial revision to change history box by adding EB meeting and annex numbers in the Date column.
04.0	13 March 2012	EB 66, Annex 9 Revision required to ensure consistency with the "Guidelines for completing the project design document form for small-scale CDM project activities"
03.0	15 December 2006	EB 28, Annex 34 • The Board agreed to revise the CDM project design document for small-scale activities (CDM-SSC-PDD), taking into account CDM-PDD and CDM-NM.

Version	*Date*	*Description*
02.0	08 July 2005	EB 20, Annex 14 • The Board agreed to revise the CDM SSC PDD to reflect guidance and clarifications provided by the Board since version 01 of this document. • As a consequence, the guidelines for completing CDM SSC PDD have been revised accordingly to version 2. The latest version can be found at <http://cdm.unfccc.int/Reference/Documents>.
01.0	21 January 2003	EB 07, Annex 05 Initial adoption.

Decision Class: Regulatory
Document Type: Form
Business Function: Registration
Keywords: project design document, SSC project activities