



**Monitoring report form for CDM project activity**  
(Version 07.0)

**MONITORING REPORT**

<b>Title of the project activity</b>	BQS improved cookstoves for Burundi's schools	
<b>UNFCCC reference number of the project activity</b>	9791	
<b>Version number of the PDD applicable to this monitoring report</b>	2.0	
<b>Version number of this monitoring report</b>	2.1	
<b>Completion date of this monitoring report</b>	21/09/2020	
<b>Monitoring period number</b>	1	
<b>Duration of this monitoring period</b>	25/01/2016 – 31/12/2018	
<b>Monitoring report number for this monitoring period</b>	NA	
<b>Project participants</b>	Burundi Quality Stoves S.A. Shell Trading International Limited	
<b>Host Party</b>	Burundi	
<b>Applied methodologies and standardized baselines</b>	AMS-I.E – “Switch from non-renewable biomass for thermal applications by the user” – Version 05.0	
<b>Sectoral scopes</b>	1. Energy industries (renewable/ non renewable sources)	
<b>Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period</b>	<b>Amount achieved before 1 January 2013</b>	<b>Amount achieved from 1 January 2013</b>
	-	306,622
<b>Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD</b>	534,711	

## SECTION A. Description of project activity

### A.1. General description of project activity

Burundi Quality Stoves (BQS) has developed an improved cookstoves project for schools of Burundi. The small scale CDM project activity aims at:

1. Distributing institutional improved cookstoves (IICS) in schools of Burundi to replace currently used old masonry stoves and open fire three-stone system (and traditional stoves); and
2. Switching from non-renewably logged trees to a sustainable energy supply: briquettes made of renewable biomass waste.

Compared to the commonly used three-stone fires or traditional stoves, the advanced closed technology of the fixed IICS installed allows quicker heating-up, longer cooking and heat retaining with less fuel wood as well as lower combustion fumes. It results in saving wood-fuel and associated expenses. Along with the diffusion of such a stove to replace currently inefficient cooking systems, a renewable biomass supply-chain has been set up, by sourcing unutilized biomass residues to produce renewable biomass briquettes and market it to the participating schools in replacement of their non-renewable woodfuel.

As section B.1 shows, the initially considered ICS designed by the Turkish company SOBAH (indicative choice), has finally not been selected for design and price reasons. The decision has no impact on the already established baseline. On the other hand, less stoves of only one size and of fixed type as well as more schools have been involved in the project activity.

The implementation of 940 stoves in 284 schools, supplied with 12,631 tonnes of renewable biomass briquettes, and the associated awareness and training campaigns in schools has helped halving these communities' fuel use and turning it 100% renewable. Over this first monitoring period, the project has saved 306,622 tCO<sub>2e</sub> greenhouse gas emissions by reducing the use of non-renewable biomass within the country, thus slowing down deforestation.

While initially envisaged in boarding schools only at project inception and initial PDD registration request, the Government's schools canteen program has been extended to further schools including primary and secondary "non-boarding" schools (day schools), due to the lenders' growing interest in supporting food programmes for children and their families through the educative institutions and local agricultural production at the same time. As assessed and revised in detail in section B.6.1 of the PDD, both school schemes have been surveyed and feature similar cooking woodfuel consumption baseline/history, with day schools offering breakfast and lunch while boarding schools serve lunch and dinner. However, the non-boarding schools' wood fuel consumption is slightly lower.

Therefore, the more conservative baseline is applied to all types of schools in order to account for ongoing abandonment of the boarding school system, as per 2019 government communication<sup>1</sup>, which states that: "the Ministry has migrated from the system of boarding schools to the system of schools with school canteens in the provinces of Bujumbura Rural (5), Bujumbura Mairie (13), Buzanza (4), Ngozi (6), Kirundo (7), Gitega (13) and Muyinga (2). [...] The purpose of this letter is to ask you to support us for the rest of the boarding schools and to extend this school canteen programme to all the provinces of the national territory." The letter documents the ongoing progressive phase out of boarding schools in favour of day schools since 2014.

### A.2. Location of project activity

Host Party: The Republic of Burundi is the host country.

Region/State/Province: All provinces, starting by Bujumbura province.

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<sup>1</sup> '2019-08-22 Lettre Ministre WFP internats' letter provided to the DOE

City/Town/Community etc.: All schools communities' locations, starting by Bujumbura.

Physical/ Geographical location: The project is to take place in schools in Burundi, starting with Bujumbura province. As a reference, Bujumbura city centre's geo-coordinates are 3°22'34" S and 29°21'36" E.

The country-wide geographical area corresponds to the area where renewable biomass is distributed and used in replacement of the former non-renewable woodfuel in IICS.

**The list of all participating schools included is provided in Annex 1**

### A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Burundi	BURUNDI QUALITY STOVES S.A.	No
United Kingdom of Great Britain and Northern Ireland	SHELL TRADING INTERNATIONAL LIMITED	No

### A.4. References to applied methodologies and standardized baselines

The approved baseline and monitoring methodology applied to the project activity is Version 05 of AMS I.E – “Switch from non-renewable biomass for thermal applications by the user”, EB 68.

### A.5. Crediting period type and duration

The project activity applies a renewable crediting period of 7 years. This is the first renewable crediting period, lasting from 25/01/2016 to 24/01/2023.

## SECTION B. Implementation of project activity

### B.1. Description of implemented project activity

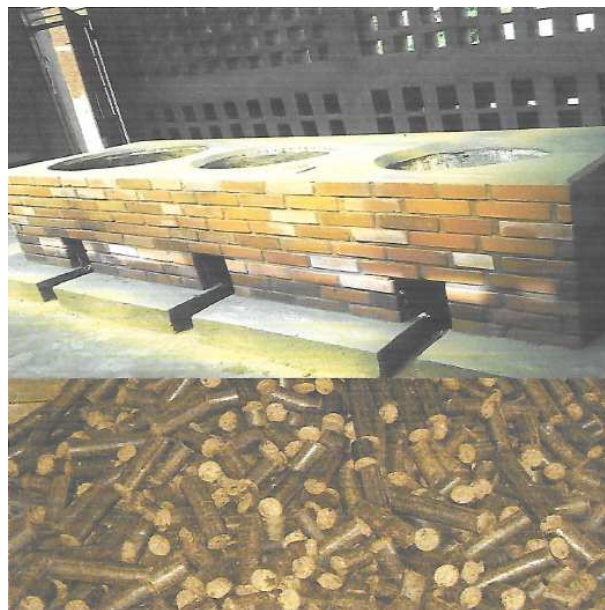
Since January 2016, the project activity has implemented 940 institutional improved cooking stoves (IICS) in 284 schools spread over 16 communes in 4 provinces (Bubanza, Bujumbura, Cibitoke, and Gitega) supplied with 12,631 tonnes of renewable briquettes during the first monitoring period.

The IICS come instead of the initially considered ICS designed by the Turkish company SOBAH, which was an indicative choice.

The fixed stoves, mostly installed in batches of two or three per school kitchen, have an average thermal efficiency of 44.8% and an average firepower of 32.78 kW<sub>th</sub><sup>2</sup>.

Compared to the formerly used traditional stoves, the advanced closed design of the institutional improved cookstoves employed in the project allows quicker heating-up, longer cooking and heat retaining with less woodfuel as well as lower combustion fumes:

<sup>2</sup> As per CRUEA Water Boiling tests performed on April 14<sup>th</sup>, 2019.



v.s.

The project consists in switching 100% of the fuel consumption of the schools of Burundi from non-renewable biomass consumption for thermal applications into renewable sources, thanks to innovative production of briquettes made of renewable biomass wastes in Bujumbura with briquetting machines Jumbo 90.

The school canteens program benefits 213,240 students as per 2018/19 schools population, with the following triple impacts:

- Stimulate schools enrolment in food-insecure areas;
- Reduce school dropouts;
- Favour children's completion of study cycle

## **B.2. Post-registration changes**

### **B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents**

N/A

### **B.2.2. Corrections**

Small corrections to the project information, such as specification of the term "Improved Cook Stove (ICS)" by Institutional Improved Cook Stove (IICS)" (multiple sections), revision of the section on Sustainable Development, or update of location and number of briquetting machines.

Corrections that are being submitted with this monitoring report as part of the request for issuance (post-registration change – issuance track) as applicable from this monitoring period.

The version number and the completion date of the revised PDD and of the DOE validation report are 2.0 (21/09/2020) and 1.0 (23/09/2020), respectively.

### **B.2.3. Changes to the start date of the crediting period**

Following project implementation delays, the start date of the crediting period has been postponed from previously expected 01/06/2014 to 25/01/2016, in compliance with §278 "Changes to the start date of the crediting period" of the CDM Project Standard. The change has been notified to the secretariat on 28/05/2020 and affects the start of this monitoring period (category B).

**B.2.4. Inclusion of monitoring plan**

N/A

**B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents**

Monitoring change (update) of the school years duration and stoves operational status: School year calendar duration is estimated ex-ante at 226 days (three-year average from 2016/17 to 2018/19) instead of 241 days and to be monitored ex-post at actual.

**Op\_kitchen i,y:** the parameter has a value of 1 if kitchen *i* still operates all of the installed IICS, or a prorate of the IICS found in order of operation out of the total number of IICS initially installed, or a value of 0 if none of the IICS operate.

The operating kitchen status is further discounted by the weighted duration of eventual renewable briquettes shortages (in this case they temporarily have to revert to using firewood instead). In this context, it can be assumed that schools have classes and cook the meals every single day of the school year calendar (except in case of Force Majeure closure).<sup>3</sup> Student attendance is incentivized by the provision of the meals.

Streamline of parameter table in section 7.1 to have a biennial monitoring frequency (instead of annual), to make it consistent with the currently required and actual biennial “physical check” performed by the project implementer under current measurement procedure requirements of the PDD. Removal of “statistical average” in “source of data” of the parameter table, which is more conservative.

The changes are permanent changes to the registered monitoring plan and are submitted with this monitoring report as part of the request for issuance (post-registration change - issuance track) as applicable from this monitoring period.

The version number and the completion date of the revised PDD and of the DOE validation report are 2.0 (21/09/2020) and 1.0 (23/09/2020), respectively.

**B.2.6. Changes to project design**

Replacement of ex-ante indicative Turkish-manufactured cook stove by “Institutional Improved Cook Stove (IICS)” and focus on installation of new IICS (as opposed to refurbishment of masonry stoves for briquettes consumption).

Furthermore, update to the types of schools and baseline woodfuel consumption: While initially envisaged in boarding schools only at project inception and initial PDD registration request, the Government's schools canteen program has been extended to further schools including primary and secondary “non-boarding” schools (day schools), due to the lenders' growing interest in supporting food programmes for children and their families through the educative institutions and local agricultural production at the same time. As assessed and revised in details in section B.6.1 of the PDD, both school schemes have been surveyed and shown to feature comparable cooking woodfuel consumption baseline/history, with day schools offering breakfast and lunch when boarding school serve two meals per day too, yet the non-boarding schools consumption amounting to slightly lower.

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<sup>3</sup> All schools are open daily except Sundays, public holidays and during vacation time (cf. Ministry note “2018-09-11 NOTE CIRCULAIRE DPE”) Decrees from the Ministry of Education detail the amount of school days per calendar year and reveal an average of 226 school days over the last 3-years period monitored. PP initially counted ex-ante with 241 school days and revised down the ex-ante ER calculations accordingly.

The changes that are being submitted with this monitoring report as part of the request for issuance (post-registration changes - issuance track) as applicable from this monitoring period.

**B.2.7. The version number and the completion date of the revised PDD and of the DOE validation report are 2.0 (21/09/2020) and 1.0 (23/09/2020), respectively. Changes specific to afforestation or reforestation project activity**

N/A

## SECTION C. Description of monitoring system

### Sales Agreement

Before any kitchen is included in the project, a sales agreement between the project proponent and the responsible of woodfuel supply of each kitchen was signed, displaying the following information:

- Name and location of the kitchen
- Number of persons depending on the kitchen
- Agreement that the kitchen cedes all its Carbon Emissions Reductions rights to BQS
- Information regarding the unique identification of all IICS with detail specification (including power output)
- Installation terms and instructions
- Maintenance services

Manual on how to use the IICS has been provided.

### Monitoring organization

BQS is responsible for overall monitoring management. All collected data is double-checked based on the sales agreements. The project monitoring database includes the selling date of each IICS and each renewable biomass delivery and help calculate the emission reductions attributable to each monitoring period. These records enable to determine the status of the CDM project activity: the number of IICS installed, the quantity of renewable biomass distributed, information on baseline and previous monitoring surveys and verification results. Double counting is avoided thanks to the unique identification of each stove included in the project as well as using appropriate record keeping procedures.

The Project Manager coordinates and endorses the overall responsibility for all CDM monitoring of the project, including:

- Develop, approve, execute, and improve the CDM Monitoring/Reporting Procedures;
- Organize in schools seminar to inform and train the monitoring staff to the monitoring procedures;
- Ensure that logistics is available and properly suited to efficiently perform the monitoring;
- Communicate and coordinate the monitoring work of all business units;
- Validate and electronically archive all monitoring data on a monthly basis throughout the crediting period (and conserve it at least for 2 further years);
- Calculate and report the emission reductions; and
- Coordinate the DOE work during the verification audit.

### Monitoring Plan

Parameters monitored as per methodology AMS-I.E (Version 05):

- ✓  $N_{IICS/j,y}$  Total number of IICS distributed or replaced by an equivalent appliance in year y
- ✓  $Op\_kitchen_{i,y}$  Operating status of kitchen i in year y
- ✓  $M_{renewable.biomass,y}$  Quantity of renewable biomass consumed by the project in year y.
- ✓  $N_{pers / kitchen_{i,y}}$  Number of person dependant on kitchen i in the year y

The following figure shows the monitoring framework described.

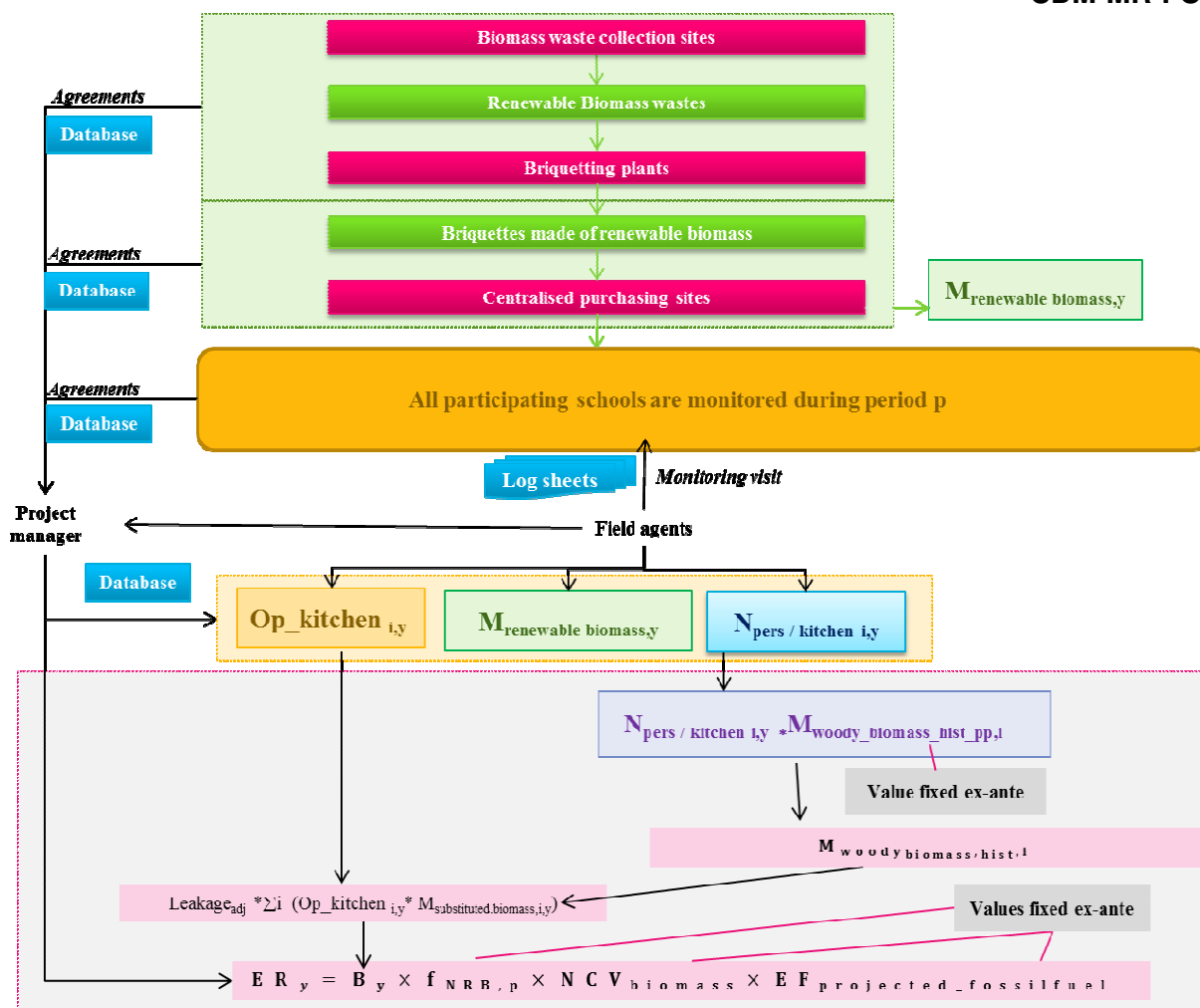


Figure 1: Monitoring flowchart

## SECTION D. Data and parameters

### D.1. Data and parameters fixed ex ante

Data/Parameter	$P_1$
Unit	kW <sub>th</sub>
Description	Useful thermal output capacity of the IICS
Source of data	Performance test results from the manufacturer
Value(s) applied	32.78
Choice of data or measurement methods and procedures	Useful thermal output of the IICS has been estimated by Water Boiling Test. Tests results have been made available to the DOE.
Purpose of data/parameter	Small-scale threshold, debundling compliance and automatic additionality compliance
Additional comments	-

Data/Parameter	$f_{NRB,y}$
Unit	Fraction
Description	Fraction of biomass used in the absence of the CDM project in year $y$ that can be established as non-renewable biomass
Source of data	Table 2 of Information Note EB 67 Annex 22
Value(s) applied	0.77

Choice of data or measurement methods and procedures	National default value.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	The value has been approved by the DNA of Burundi the 6 <sup>th</sup> September 2012 <sup>4</sup>

<b>Data/Parameter</b>	<b>NCV<sub>biomass</sub></b>
Unit	TJ/tonne
Description	Net calorific value of the non-renewable woody biomass that is substituted
Source of data	2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied	0.015
Choice of data or measurement methods and procedures	According to methodology AMS-I.E, the Net Calorific Value of the non-renewable woody biomass that is substituted has to be taken as IPCC default for wood fuel.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	-

<b>Data/Parameter</b>	<b>EF<sub>projected_fossilfuel</sub></b>
Unit	tCO <sub>2</sub> /TJ
Description	Emission factor for the substitution of non-renewable woody biomass by similar consumers
Source of data	2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied	81.6
Choice of data or measurement methods and procedures	As indicated by the methodology AMS-I.E, 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% weight is assigned to coal as the alternative solid fossil fuel (96 tCO <sub>2</sub> /TJ) and a 25% weight is assigned to both liquid and gaseous fuels (71.5 tCO <sub>2</sub> /TJ for Kerosene and 63.0 tCO <sub>2</sub> /TJ for Liquefied Petroleum Gas (LPG)).
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	-

<b>Data/Parameter</b>	<b>M<sub>woody_biomass_hist_pp,,i</sub></b>
Unit	tonnes/ capita at the site <i>i</i>
Description	Historical consumption of woody biomass per person dependent on the kitchen <i>i</i> (tonnes per person)
Source of data	Derived from historical data
Value(s) applied	1.13
Choice of data or measurement methods and procedures	As permitted by the methodology AMS-I.E, this was derived from historical records of fifteen schools s' wood fuel's consumption.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	-

<sup>4</sup> <http://cdm.unfccc.int/DNA/fNRB/index.html>

Data/Parameter	Leakage <sub>adj</sub>
Unit	fraction
Description	Net to gross adjustment factor to account for leakages
Source of data	Methodology AMS-I.E Version 05
Value(s) applied	0.95
Choice of data or measurement methods and procedures	In case this leakage adjustment factor is applied, it is not required to survey the use/diversion of non-renewable woody biomass saved under the project activity by non-project households/users that previously used renewable energy sources.
Purpose of data/parameter	Calculation of leakage emissions
Additional comments	-

Data/Parameter	EF <sub>EL,j,y</sub>
Unit	tCO <sub>2</sub> /MWh
Description	Emission factor for electricity generation for source <i>j</i> in year <i>y</i>
Source of data	"Tool to calculate baseline, project and/or leakage emissions from electricity consumption" (Version 01)
Value(s) applied	1.3
Choice of data or measurement methods and procedures	Option A2: Use a conservative default value of 1.3 tCO <sub>2</sub> /MWh
Purpose of data/parameter	Calculation of leakage emissions
Additional comments	-

Data/Parameter	TDL <sub>j,y</sub>
Unit	-
Description	Average technical transmission and distribution losses for providing electricity to the briquetting machine
Source of data	"Tool to calculate baseline, project and/or leakage emissions from electricity consumption" (Version 01)
Value(s) applied	0.20
Choice of data or measurement methods and procedures	Use as default values of 20% for option: (a) project or leakage electricity consumption sources;
Purpose of data/parameter	Calculation of leakage emissions
Additional comments	-

Data/Parameter	SEC <sub>briq</sub>
Unit	MWh/tonne
Description	Default value for the specific quantity of electricity consumed per tonne of briquettes produced
Source of data	Estimated ex-ante based on historic specific electricity consumption per ton of briquettes produced.
Value(s) applied	0.038
Choice of data or measurement methods and procedures	The specific electricity consumption is estimated ex-ante based on historic data of electricity consumption per tonne of briquettes produced
Purpose of data/parameter	Calculation of leakage emissions
Additional comments	Specific consumption provided by the constructor is 35-38 kWh/ Metric tonne of Biomass. In order to be conservative, a value of 38 kWh/tonne is chosen

## D.2. Data and parameters monitored

Data/Parameter	Op_kitchen i,y
Unit	-
Description	Operating status of kitchen i (equipped with IICS) in year y
Measured/calculated/default	Measured
Source of data	Calculated based monitoring findings (reports of physical checks).
Value(s) of monitored parameter	As provided kitchen by kitchen, year by year, in monitoring spreadsheet provided to the DOE
Monitoring equipment	A physical check will be performed by the CDM project proponent at least once every two years (biennial) in accordance with the monitoring plan.
Measuring/reading/recording frequency	At least biennially  Physical onsite checks/surveys took place in - School year 2016/17 (survey date/start of data collection: 13/09/2016) - School year 2017/18 (survey date/start of data collection: 19/02/2018) - School year 2018/19 (survey date/start of data collection: 30/09/2018)
Calculation method (if applicable)	The operational status of each kitchen in the year y is reflected by the parameter (Op_kitchen i,y) at a value of 1 if kitchen i still operates all of the improved cookstoves installed, or a prorata of the IICS found in order of operation out of the total number of IICS initially installed, and a value of 0 if none of the IICS is operated.
QA/QC procedures	-
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Guidance for monitoring are provided to field agents in order to determine the operating status of each kitchen during monitoring session with specific conditions to comply with.

Data/Parameter	M <sub>renewable.biomass,y</sub>			
Unit	tonnes/year			
Description	Quantity of renewable biomass consumed by the project activity in year <i>y</i> .			
Measured/calculated/default	School-year 2015-2016	School-year 2016-2017	School-year 2017-2018	School-year 2018-2019
	3,401	3,066	3,714.5	2,449.5
Source of data	BQS delivery notes			
Value(s) of monitored parameter	As provided kitchen by kitchen, year by year, in monitoring spreadsheet provided to the DOE			
Monitoring equipment	At each distribution site a delivery notes is made for each batch of briquettes sold containing the following information: distribution site, production site, school provided and quantity of biomass. The delivery notes are kept and collected for monitoring the quantity of renewable biomass consumed by the project from each production site.			
Measuring/reading/recording frequency	Every month			
Calculation method (if applicable)	-			
QA/QC procedures	The quantity is cross checked with school's receipt			
Purpose of data/parameter	Leakage emissions and Methodology requirements			

Additional comments	<p>The parameter is used for monitoring leakage emissions from electricity consumption.</p> <p>Quantities in school year 2015-16 only represent briquette deliveries from date of stove installation in the first half of calendar year 2016 to end of school year 2015-16 on 30/06/2016.</p> <p>Similarly, quantities in school year 2018-19 represent briquette deliveries from start of school year in September 2018 to end of December 2018 (cf. to ER calculation sheet for further details).</p>
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<b>Data/Parameter</b>	<b>N<sub>pers / kitchen i,y</sub></b>				
Unit	pers/year				
Description	Number of person dependant on kitchen <i>i</i> in the year <i>y</i>				
Measured/calculated/default	Measured				
Source of data	Education ministry records				
Value(s) of monitored parameter	School-year 2015-2016	School-year 2016-2017	School-year 2017-2018	School-year 2018-2019	
	184,129	185,519	205,817	213,240	
Monitoring equipment	Number of persons dependant on kitchen <i>i</i> will be inquired and recorded during each monitoring period				
Measuring/reading/recording frequency	At least annually				
Calculation method (if applicable)	-				
QA/QC procedures	Data has been cross checked with relevant literature. Database will be periodically checked by the project proponent.				
Purpose of data/parameter	Calculation of baseline emissions				
Additional comments	For ex-post emission calculation, the population (occupancy) of each school is monitored.				

<b>Data/Parameter</b>	<b>N<sub>IICS/i,y</sub></b>				
Unit	number				
Description	Total number of IICS distributed) in year <i>y</i>				
Measured/calculated/default	Measured				
Source of data	Order and delivery records				
Value(s) of monitored parameter	940				
Monitoring equipment	-				
Measuring/reading/recording frequency	At installation				
Calculation method (if applicable)	Measured				
QA/QC procedures	Cross-check with monitored operational figures (monitoring surveys conducted to determine $O_{p\_kitchen\ i,y}$ ).				
Purpose of data/parameter	Used to record the number/location of each stove distributed and verify the compliance with small scale limit				
Additional comments	<b>N<sub>IICS/i,y</sub></b> ( <i>j</i> indicating IICS distributed * $P_j < 45\ MW_{th}$ )				

As per ministry letters, the following table shows the school calendars of the relevant school years of this monitoring period:

School calendar Burundi (School days without Sunday and public holiday)				
	2015-16	2016-17	2017-18	2018-19
<b>1. trimester:</b>	21/09 - 24/12	26/09 - 23/12	11/09 - 22/12	09/09 - 24/12
School days	78	74	86	89
<b>2. trimester:</b>	04/01 - 08/04	09/01 - 07/04	02/01 - 30/03	06/01 - 10/04
School days	81	76	75	79
<b>3. trimester</b>	17/04 - 01/07	24/04 - 07/07	09/04 - 13/07	20/04 - 02/07
School days	63	61	80	59
<b>TOTAL - School days</b>	<b>222</b>	<b>211</b>	<b>241</b>	<b>227</b>

Table 1: School calendar Burundi from 2015/16 to 2018/19

### D.3. Implementation of sampling plan

This section is not relevant, as no sampling plan is involved since all participating school sites are exhaustively monitored in the Project.

## SECTION E. Calculation of emission reductions or net anthropogenic removals

### E.1. Calculation of baseline emissions or baseline net removals

Baseline Emissions of the project activity are calculated as:

$$ER_y = B_y * f_{NRB,y} * NCV_{biomass} * EF_{projected\_fossilfuel} \quad (1)$$

Where:

$ER_y$	Emission reductions during the year $y$ in tCO <sub>2</sub> e
$B_y$	Quantity of woody biomass that is substituted or displaced in tonnes
$f_{NRB,y}$	Fraction of woody biomass used in the absence of the project activity in year $y$ that can be established as non-renewable biomass using survey methods or government data or approved default country specific fraction of non-renewable woody biomass ( $f_{NRB}$ ) values available on the CDM website <sup>5</sup>
$NCV_{biomass}$	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne)
$EF_{projected\_fossilfuel}$	Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 tCO <sub>2</sub> /TJ.

Determination of  $B_y$ :

$B_y$  is determined as per option (a) approach:

- (a) Calculated as the product of the number of appliances multiplied by the estimate of average annual consumption of woody biomass substituted per appliance (tonnes/year); This can be derived from historical data or estimated using survey methods.

<sup>5</sup> Default values endorsed by designated national authorities and approved by the Board are available at <<http://cdm.unfccc.int/DNA/fNRB/index.html>>

$B_y$  is determined based on the sum of woody biomass substituted by each kitchen<sup>6</sup> in the year  $y$  ( $M_{\text{substituted biomass},i,y}$ ) in tonnes/kitchen/y taking into consideration the operating status of each kitchen as follows:

$$B_y = \text{Leakage}_{\text{adj}} * \sum i (\text{Op\_kitchen}_{i,y} * M_{\text{substituted\_biomass},i,y}) \quad (2)$$

Where:

$B_y$	Quantity of woody biomass that is substituted or displaced in tonnes in year $y$
$\text{Op\_kitchen}_{i,y}$	Operating status of kitchen $i$ (equipped with IICS) in year $y$
$M_{\text{substituted\_biomass},i,y}$	Quantity of woody biomass that is substituted by operating kitchen $i$ in year $y$ (tonnes/kitchen $i/y$ )
$\text{Leakage}_{\text{adj}}$	Net to gross adjustment factor to account for leakages

### Operating status of kitchen $i$ in the year $y$ ( $\text{Op\_kitchen}_{i,y}$ )

The operational status<sup>7</sup> of each kitchen in the year  $y$  is reflected by the parameter ( $\text{Op\_kitchen}_{i,y}$ ) at a value of 1 if kitchen  $i$  still operates all of the installed IICS, or a pro rata of the IICS found in operation out of the total number of IICS initially installed, or a value of 0 if none of the IICS operate.

The operating kitchen status is further discounted by the weighted duration of eventual renewable briquettes shortages (in this case they temporarily have to revert to using firewood instead). In this context, it can be assumed that schools have classes and cook the meals every single day of the school year calendar (except in case of Force Majeure closure).<sup>8</sup> Student attendance is incentivized by the provision of the meals.

In ex-ante calculations (baseline scenario), it is assumed that all targeted schools' kitchen will properly operate with constant supply of renewable briquettes.

### Quantity of woody biomass that is substituted by kitchen $i$ in the year $y$ ( $M_{\text{substituted biomass},i,y}$ )

The quantity of woody biomass that is substituted by kitchen  $i$  in the year  $y$  ( $M_{\text{substituted\_biomass},i,y}$ ) is calculated as follows:

$$M_{\text{substituted\_biomass},i,y} = M_{\text{woody\_biomass\_hist},i} \quad (3)$$

Where:

$M_{\text{substituted\_biomass},i,y}$	Quantity of woody biomass that is substituted by kitchen $i$ in the year $y$ (tonnes/kitchen $i/y$ )
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<sup>6</sup> In the project activity, one appliance is defined as one kitchen, i.e. the entire premises whereby cooking activities are performed in the school. One kitchen may be composed of a variable number of stoves, however each school site identified in the project activity operates one kitchen, which overall fuelwood consumption and project briquettes consumption will be monitored.

<sup>7</sup> Guidance for monitoring are provided to field agents in order to determine the operating status of each kitchen during monitoring session; see Appendix 5 of PDD..

<sup>8</sup> All schools are open daily except Sundays, public holidays and during vacation time (cf. Ministry note "2018-09-11 NOTE CIRCULAIRE DPE"). Decrees from the Ministry of Education detail the amount of school days per calendar year and reveal an average of 226 school days over the school years from 2016/17 to 2018/19. PP initially counted the ex-ante estimate with 241 school days and revised down the ex-ante ER calculations accordingly.

$M_{\text{woody\_biomass\_hist},i}$  Historical consumption of woody biomass using three stones open fire / traditional stoves / former masonry stoves in the absence of the project activity by kitchen  $i$  (tonnes/kitchen  $i$ )

**Historical consumption of woody biomass using three stones open fire / traditional stoves / former masonry stoves in the absence of the project activity ( $M_{\text{woody\_biomass\_hist},i}$ )**

The historical consumption of woody biomass using three stones open fire, traditional stoves or old masonry stoves in the absence of the project activity by kitchen  $i$  (tonnes/kitchen  $i$ ) is determined as follows:

$$M_{\text{woody\_biomass\_hist},i} = M_{\text{woody\_biomass\_hist\_pp},i} * N_{\text{pers/kitchen},i,y} \quad (4)$$

Where:

$M_{\text{woody\_biomass\_hist},i}$  Historical consumption of woody biomass by kitchen  $i$  (tonnes/kitchen  $i$ )  
 $M_{\text{woody\_biomass\_hist\_pp},i}$  Historical consumption of woody biomass per person dependant on the kitchen  $i$  (tonnes per person)  
 $N_{\text{pers/kitchen},i,y}$  Number of person dependent on kitchen  $i$  in the year  $y$  (pers/year)

**Historical consumption of woody biomass per person dependant on the kitchen  $i$  (tonnes per person) ( $M_{\text{woody\_biomass\_hist\_pp},i}$ )**

Wood fuel is by far the main cooking fuel in Burundi's schools. The project activity will substitute all the woodfuel<sup>9</sup> used by these communities by briquettes made of renewable biomass.

The quantity of woody biomass that is substituted by kitchen  $i$  in the year  $y$  ( $M_{\text{substituted\_biomass},i,y}$ ) is calculated as follows:

$$M_{\text{substituted\_biomass},i,y} = M_{\text{woody\_biomass\_hist},i} \quad (3)$$

Where:

$M_{\text{substituted\_biomass},i,y}$  Quantity of woody biomass that is substituted by kitchen  $i$  in the year  $y$  (tonnes/kitchen  $i/y$ )  
 $M_{\text{woody\_biomass\_hist},i}$  Historical consumption of woody biomass using three stones open fire / traditional stoves / former masonry stoves in the absence of the project activity by kitchen  $i$  (tonnes/kitchen  $i$ )

**Historical consumption of woody biomass using three stones open fire / traditional stoves / former masonry stoves in the absence of the project activity ( $M_{\text{woody\_biomass\_hist},i}$ )**

The historical consumption of woody biomass using three stones open fire, traditional stoves or old masonry stoves in the absence of the project activity by kitchen  $i$  (tonnes/kitchen  $i$ ) is determined as follows:

$$M_{\text{woody\_biomass\_hist},i} = M_{\text{woody\_biomass\_hist\_pp},i} * N_{\text{pers/kitchen},i,y} \quad (4)$$

<sup>9</sup> Currently, BQS has demonstrated that using briquettes made of renewable biomass wastes together with IICS will save money (see test report provided to the DOE). Actually, schools are managing their woodfuel supply independently and are refunded for woodfuel expenses by Finance Ministry. Due to the fact that the use of briquettes will save money, once the project implemented, schools participating to the project will have to sign a sale agreement for briquettes supply exclusivity and woodfuel expenses other than briquettes will not be refunded thus giving incentive to not use any other woodfuel than briquettes.

Where:

$M_{\text{woody\_biomass\_hist},i}$	Historical consumption of woody biomass by kitchen $i$ (tonnes/kitchen $i$ )
$M_{\text{woody\_biomass\_hist\_pp},i}$	Historical consumption of woody biomass per person dependant on the kitchen $i$ (tonnes per person)
$N_{\text{pers/kitchen } i,y}$	Number of person dependent on kitchen $i$ in the year $y$ (pers/year)

### Historical consumption of woody biomass per person dependant on the kitchen $i$ (tonnes per person) ( $M_{\text{woody\_biomass\_hist\_pp},i}$ )

Historical data from Education ministry (28/06/2017) provides the following up-to-date figures in kg per day or stere per day based on records across 15 boarding schools around Bujumbura and 12 day schools in three different provinces of the country<sup>10</sup>:

The average historical wood fuel consumption of the boarding schools over the last three years prior to project start (2009, 2010 and 2011) is 9.3 wood steres per day per school and the average historical wood fuel consumption of day schools in 2017 is **5 kg per student per day**. A comparison reveals that the latter value is more conservative.

The following ex-ante assumptions are used for converting the boarding school value into kg through dividing the mean historical woodfuel consumption by the historical number of persons per school:

- The average number of students per school is 653.
- The students are at school during 226 days over 365<sup>11</sup>.
- A factor of 0.35 is used for converting stere into tonnes of woodfuel (GTZ-HERA, Manual for Programs and Projects to Implement Cooking Energy Interventions, 2012).

While boarding schools serve lunch and dinner, day schools provide for breakfast and lunch.

### Calculation for one year:

The historical consumption per person per school per year will be obtained by multiplying the daily consumption by 226 days.

**Table 1: School's historical consumption per person of woodfuel in tonne/days/year**

	$M_{\text{woody\_biomass\_hist\_pp},i}$	$M_{\text{woody\_biomass\_hist\_pp},i}$
SCHOOL	<i>tonnes per capita per day</i>	<i>tonnes per capita per year</i>
Conservative baseline consumption retained	0.005	1.13

**Number of persons dependent on kitchen  $i$  in the year  $y$  (pers/year) ( $N_{\text{pers/kitchen } i,y}$ )**

<sup>10</sup> Kirundo, Ngozi and Muyinga.

The data available for the 12 day schools are representative of the historical woodfuel consumption per student for the following reasons:

- i. The same traditional food with same cooking practices is observed in all schools' kitchens requiring the same amount of energy.
- ii. Same woodfuel type (non-renewable biomass) is used in all schools' kitchens around Burundi.
- iii. Same climate can be observed around all the country thus not having any differential impacts over the energy consumption for cooking activities around the country.

<sup>11</sup> Three-year average. Student holiday calendar for 2016/17 to 2018/19 is provided to the DOE. The finally applicable value will be determined ex-post. See above.

In order to take into consideration the occupancy rate of each school, the number of person dependant on kitchen  $i$  is monitored ex-post along all monitoring period.

School-year 2014-2015	School-year 2015-2016	School-year 2016-2017	School-year 2017-2018	School-year 2018-2019
-	184,129	185,519	205,817	213,240

### Non-renewable woody biomass fraction ( $f_{NRB,y}$ )

The schools's kitchens are fired with non-renewable wood fuel. The non-renewable biomass fraction ( $f_{NRB,y}$ ) was taken at its national default value of 77%, as approved by the CDM Executive Board at its 67<sup>th</sup> meeting and lately by the Burundi's DNA the 6 September 2012<sup>12</sup>.

### Emission factor for relevant substitution fossil fuel ( $EF_{\text{projected\_fossilfuel}}$ )

According to methodology AMS-I.E, the Emission Factor of the substitution fuel likely to be used by similar consumers has to be taken at 81.6 tCO<sub>2</sub>/TJ.

### Net calorific value of the substituted non-renewable woody biomass ( $NCV_{\text{biomass}}$ )

According to methodology AMS-I.E, the Net Calorific Value of the non-renewable woody biomass that is substituted has to be taken as IPCC default for wood fuel, 0.015 TJ/tonne.

## E.2. Calculation of project emissions or actual net removals

### A. Shifts of pre-project activities

As the renewable biomass used is all from residue/waste, this emission source is not applicable to this project.

### B. Emissions related to the production of the biomass

As the renewable biomass used is all from residue/waste, this emission source is not applicable to this project.

## E.3. Calculation of leakage emissions

### C. Competing uses for the biomass

The Project activity's biomass supply involves agro-industrial wastes (sugar cane wastes, sawmills residues...) which are widely available in the region and currently burnt without energy purpose, therefore this source of leakage can be neglected. The biomass used in the project activity could not be used for other purposes in the absence of the project.

"The data from agricultural sector of Burundi estimates that every year a theoretical potential of 1,127,302 tonnes of biomass wastes are not used" p84. Less than 36,000 t of biomass (wet basis) is needed per year for all BQS's projects. The surplus of renewable biomass for the project is more than 100%. Thus this source of leakage can be neglected.

<sup>12</sup> <http://cdm.unfccc.int/DNA/fNRB/index.html>

Methodology AMS-I.E further indicates that leakage related to the non-renewable woody biomass saved by the project activity shall be assessed based on *ex post* surveys of users and the areas from which this woody biomass is sourced (using 90/30 precision for a selection of samples).

- Alternatively,  $B_y$  is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.

If the equipment currently being utilised is transferred from outside the boundary to the project boundary, leakage is to be considered.

- The improved cook stoves to be disseminated in the project don't include any second-hand equipment but exclusively brand new ones, therefore no currently utilised equipment will be transferred from outside the boundary to the project activity.

### **Emissions related to the transformation of renewable biomass wastes into briquettes**

Furthermore, potential leakage emissions arise from the electricity consumption from the briquetting machines processing the transformation from renewable biomass into briquettes.

- This emissions source is calculated as per the tool '*Tool to calculate baseline, project and/or leakage emissions from electricity consumption*'.

#### ***Leakage emissions from electricity consumption***

Leakage emissions from consumption of electricity are calculated as follows:

$$LE_{EC,y} = \sum_j EC_{PJ,j,y} * EF_{EL,j,y} * (1 + TDL_{j,y}) \quad (5)$$

Where:

$LE_{EC,y}$	Leakage emissions from electricity consumption in year $y$ ( $tCO_2/yr$ )
$EC_{PJ,j,y}$	Quantity of electricity consumed by the project electricity consumption source $j$ in year $y$ (MWh/yr)
$EF_{EL,j,y}$	Emission factor for electricity generation for source $j$ in year $y$ ( $tCO_2/MWh$ )
$TDL_{j,y}$	Average technical transmission and distribution losses for providing electricity to source $j$ in year $y$
$j$	Sources of electricity consumption in the project

#### ***Quantity of electricity consumed by the project ( $EC_{PJ,j,y}$ )***

The quantity of electricity consumed by the project  $EC_{PJ,j,y}$  is calculated based on a default value for the specific quantity of electricity consumed per ton of briquettes produced  $SEC_{briq}$  (MWh/ton) multiplied by the quantity of briquettes supplied to the project activity  $M_{renewable.biomass,y}$ .

#### ***Quantity of renewable biomass consumed by the project activity in year $y$ ( $M_{renewable.biomass,y}$ )***

Quantity of renewable biomass consumed by the project activity in year  $y$ :

Year	$M_{renewable.biomass,y}$ (tons)
2014-15	-
2015-16	3,401,000
2016-17	3,066,000
2017-18	3,714,500
2018-19	2,449,500

Quantities in 2015-16 represent briquette deliveries from date of installation to end of school year on 01/07/2016. Quantities in school year 2018-19 represent briquette deliveries from start of school year in September 2018 to 24/12/2018, which corresponds to end of calendar year (cut-off monitoring period) due to vacation from 25/12/2018 to 21/12/2018.

**Emission factor for electricity generation ( $EF_{EL,j,y}$ )**

→ Option A2 chosen: *conservative default value of 1.3 tCO<sub>2</sub>/MWh*.

**Average technical transmission and distribution losses for providing electricity to source  $j$  in year  $y$  ( $TDL_{j,y}$ )**

→ Option chosen: *default values of 20%*.

**Leakage emissions from transportation of biomass**

→ Transportation of renewable biomass wastes from collection sites to the briquetting plant is neglected as the briquetting plants are operated close to the residues provision sites.

Moreover, taking into consideration that:

- the average distance of collection of renewable biomass for the Project activity is shorter than the mean distance of origin of previously used biomass in the baseline and;
- AMS-I.C methodology mentions that "If biomass residues are transported over a distance of more than 200 kilometres (one way) due to the implementation of the project activity then this leakage source attributed to transportation shall be considered, otherwise it can be neglected." For the proposed project, the residues will never be transported over a distance more than 200 km (one way) thus can be neglected.

Therefore, no additional leakage emissions from transportation need to be accounted for.

Full calculations for this monitoring period is presented in the spreadsheets attached to the monitoring report.

**E.4. Calculation of emission reductions or net anthropogenic removals**

	Baseline GHG emissions or baseline net GHG removals (t CO <sub>2</sub> e)	Project GHG emissions or actual net GHG removals (t CO <sub>2</sub> e)	Leakage GHG emissions (t CO <sub>2</sub> e)	GHG emission reductions or net anthropogenic GHG removals (t CO <sub>2</sub> e)		
				Before 01/01/2013	From 01/01/2013	Total amount
<b>Total</b>	307,371	-	749	-	306,622	306,622

Annual emission reductions split up as follows:

$$ER_{2016} = 95,113 \text{ tCO}_2$$

$$ER_{2017} = 101,622 \text{ tCO}_2$$

$$ER_{2018} = 109,887 \text{ tCO}_2$$

Baseline GHG emissions and emission reductions are rounded down value. Leakage GHG emissions are rounded up.

**E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD**

Amount achieved during this monitoring period (t CO <sub>2</sub> e)	Amount estimated ex ante for this monitoring period in the PDD (t CO <sub>2</sub> e)
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Amount achieved during this monitoring period (t CO <sub>2</sub> e)	Amount estimated ex ante for this monitoring period in the PDD (t CO <sub>2</sub> e)
306,622	534,711

**E.5.1. Explanation of calculation of “amount estimated ex ante for this monitoring period in the PDD”**

for the monitoring period is 2 years, 11 months and 07 days (= 1,072 days in total) and the PDD ex-ante annual estimate of 182,061 tCO<sub>2</sub> is based on 284 schools:

$182,061 \text{ tCO}_2/\text{yr} / 365 \text{ days} \times 1,072 \text{ days}$

**E.6. Remarks on increase in achieved emission reductions**

N/A

**E.7. Remarks on scale of small-scale project activity**

The combined scale of the activities belonging to the same small-scale project type (Type I) remained under the limit of that type every year given that the conservative amount of improved cooking devices installed (940 IICS) at 32.78kWth/stove totals 30.81 MW<sub>th</sub> which was below the small-scale threshold of 45 MW<sub>th</sub>.

N°	PROVINCE	COMMUNE	SCHOOL
1	CIBITOKÉ	BUGANDA	RUHEMBE I
2			RUHEMBE II
3			BIHAHE I
4			BIHAHE II
5			BUGANDA I
6			BUGANDA II
7			MURAMBI
8			NDAVA TRANS
9			KAGONGO
10			GATERI
11			RUHAGARIKA
12			CUNYU
13			MBUBI
14		RUGOMBO	EP RUGEREGERE
15			RUKANA I
16			RUSORORO
17			MIKASHU
18			RUVUMERA
19			RUSIGA
20			BUSERUKO
21			KIRAMIRA
22			RUKANA II
23			RUVYAGIRA
24			MUSENYI
25			MPARAMBO
26			CUZWE
27			BUHINYUZA
28		BUKINANYANA	BITARE
29			KABERE
30			MASANGO
31			NYAMYEHA
32			NYARUHISHI
33			SEHE
34			GIKENENE
35			BUMBA II
36			BUMBA III
37			BUGARAMA
38			NYAMIRAMBO

39			NDORA
40			KIBATI
41			GIHANGO
42			MUNYINYA
43			BUTARA
44			NYAVYAMO
45			BUKINANYANA
46			GAHABURA
47			RUZIBA
48			MPARO
49			SHIMWE
50	BUJUMBURA	KABEZI	CUMBA
51			GITANGA
52			GASERU
53			GAKUNGWE
54			MICHAELLA
55			GATONGO
56			KIMINA
57			MASAMA I
58			MASAMA II
59			MIGERA
60			NYAMUZI I
61			NYAMUZI II
62			NYAMUZI III
63			RUGEMBE
64			ITYAZO
65			MUTUMBA I
66			MUTUMBA II
67			MUTUMBA III
68			NYAMUGARI
69		KANYOSHA	KIROMBWE I
70			KIROMBWE II
71			KIROMBWE III
72			KIROMBWE IV
73			KIYENZI I
74			KIYENZI II
75			NYAMABOKO I
76			NYAMABOKO II
77			RARO I
78			RARO II

79			COGA I
80			COGA II
81			BIGWA I
82			BIGWA II
83			GITONGO
84			SOROREZO
85		MUTIMBUZI	BUHOMBA
86			MARAMVYA III
87			BUGOMA
88			RUKARAMU I
89			RUKARAMU II
90			VUGIZO
91			MUGERERO
92			NYESHANGA
93			KAGWEMA
94			MUYANGE
95			NDAVA BUSONGO
96			BURAMATA
97			MPANDA - VILLAGE 5
98			KIZINA
99			RUMOTOMOTO
100			RUGUNGA
101			MUDUBUGU
102			EP Mahoro
103			GIHUNGWE I ET II
104			BWIZA BWA NINGA
105			KIRENGANE
106			NYAGATOBÉ
107			TEBERO
108			EP BUHANZA
109			EP RUCE I, II et SHANGO
110			EP BUGANYA
111			EP KIBUYE I
112			EP KIBUYE II
113			EP GASENYI
114			RUGAZI II
115			RUGAZI I
116			RUZENGA
117			RUBIZA
118			MANEGE

119			KIBENGA
120			MBUYE I
121			NYUNZWE
122			MABUYE II
123		MUSIGATI	BUMBA
124			RUZIBIRA
125			BUGANDA
126			RUSEKABUYE I
127			RUSEKABUYE II
128			MUGERI
129			KIVYUKA I
130			KIVYUKA II
131			ECOFO MIVYIRU I
132			ECOFO MIVYIRU II
133			ECOFO MUYEBE I
134			ECOFO MUYEBE II
135			ECOFO MUYEBE III
136			ECOFO KAYANGE
137			EP MPISHI
138			ECOFO BUKINGA
139			EP MUNANIRA
140			ECOFO NGONYI
141			EP MUKUNGU I
142			EP MUKUNGU II
143			KANAZI
144			GAHISE
145			TITI
146		MPANDA	BUTANUKA
147			BUTEMBE
148			MASHA
149			GATAGURA
150			RUBIRA
151			MURENGEZA II
152			RUZIBA
153			GAHWAZI
154			MAHWA
155			NYOMVYI
156			NYENDAGO
157	GITEGA	BURAZA	BUBAJI
158			BUGEGA

159		BUHINYUZA I
160		BUHINYUZA II
161		BUTEMBA
162		BURIZA
163		GASHUBI
164		GITARAMUKA I
165		GITARAMUKA II
166		KIGOTI
167		MAZA
168		MIGEZI
169		MUKA
170		NDAGO
171		NDAVA II
172		NYAKABUYE I
173		NYAKABUYE II
174		NYARUNAZI
175		RABIRO I
176		RABIRO II
177		RUBIRA
178		RUFUNZWE
179		RWEZA
180	MAKEBUKO	BUGA
181		BUGUMBASHA
182		BUHUNJA
183		GASASA
184		GASENYI
185		JANJA
186		KAROKA
187		KIGATI
188		MARAMVYA
189		MARAMVYA
190		MUHORORO
191		MUMURI
192		MURENDA
193		MWARO-MAVUVU
194		MWARO-NGUNDU
195		MWUMBA
196		NYAMAGANDIKA
197		RUTANGANIKI
198		RUTOVU

199		Ste MARIE ASSUMPTA de MUMURI
200		SIMBA
201	NYARUSANGE	BIKINGI
202		BUKORO
203		GITARAMUKA
204		JURWE
205		KIGARA
206		MASARE
207		MUYANGE
208		MUZIMA
209		NKONDO
210		NYAMAZI
211		NYARUBENGA
212		NYARUSANGE
213		NYARUTANGA
214		TYE
215	BUGENDANA	KAREMBA
216		KIVOGERO
217		KIZIGURO
218		MWURIRE
219		NKANDA I
220		NKANDA II
221		NTUNDA
222		JENDA
223		RUSHANGA
224		RWINGIRI
225		WINTEKO I
226		WINTEKO II
227		BITARE
228		BUGENDANA I
229		BUGENDANA II
230		BUHORO
231		BUSANGANA
232		CARIRE
233		CISHWA I
234		CISHWA II
235		CUNYWE
236		GATERAMA
237		KAREHE
238		KIRIMBI I

239		KIRIMBI II
240		KIVUVU I
241		KIVUVU II
242		MIGINA
243		MUGERA I
244		MUGERA II
245		MUGERA III
246		MUGITEGA
247		MUKORO
248		MUNYINYA
249		MUTOYI I
250		MUTOYI II
251		MUVUNAMBOGO
252		NYAKERU I
253		NYAKERU II
254		NYAMAGANA
255		RUTONGANIKWA I
256		RUTONGANAUKWA II
257		CUZU
258	RYANSORO	KABUYE
259		KARAGO
260		KINYONZO
261		KIRANZIRA
262		MUGANO
263		MURAMA I
264		MURAMA II
265		MUYUGA
266		NDAVA
267		NTUNDA
268		NYAKARAMBO I
269		NYAKARAMBO II
270		RWEZA
271		RWOGA
272		RYANSORO
273	MUTAHO	GATABATABA
274		GITONGO I
275		GITONGO II
276		GITONGO III
277		GITOGO IV
278		MASANGO

<b>279</b>			MURIRIMBO
<b>280</b>			NYANGUNGU I
<b>281</b>			NYANGUNGU II
<b>282</b>			RWISABI I
<b>283</b>			RWISABI II
<b>284</b>			RWISABI III

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
07.0	31 May 2019	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 02.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN);</li> <li>• Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period;</li> <li>• Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes;</li> <li>• Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods;</li> <li>• Make editorial improvements.</li> </ul>
06.0	7 June 2017	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 01.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN);</li> <li>• Make editorial improvements.</li> </ul>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> <li>• Include provisions related to delayed submission of a monitoring plan;</li> <li>• Provisions related to the Host Party;</li> <li>• Remove reference to programme of activities;</li> <li>• Overall editorial improvement.</li> </ul>
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> <li>• Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0));</li> <li>• Include provisions related to standardized baselines;</li> <li>• Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1;</li> <li>• Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>;</li> <li>• Editorial improvement.</li> </ul>
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB 70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.
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