Gold Standard®

Gold Standard for the Global Goals
Transition Annex
(To be used by all GS CDM/VER stand alone projects and PoAs, Micro Scale stand alone projects and Micro PoAs)

Version 1 – September 2017

Gold Standard

KEY PROJECT INFORMATION

Title of Project/PoA/Activity:	Improved Cooking Stoves for Nigeria Programme of Activities
GS ID of the project/PoA/activity:	834
GS Version:	2.1
Brief description of Project:	The Improved Cooking Stoves (ICS) for Nigeria Programme of Activities supplies households with improved cookstoves in several districts of Nigeria. Improved cook stoves can be used by households that currently use charcoal or firewood as their dominant fuel. In the case of the Save80 efficient cook stove, the set contains a stainless steel stove, a pot and a heat-retaining device. The Save80 needs 250 g of wood sticks to bring 6 litres of water to boil, 80% less than traditional open fires. The high quality improved cookstoves are sold at a reduced price to make them affordable to the average local households. Besides preventing greenhouse gas emissions, the objectives of the CDM Gold Standard programme are to reduce wood consumption, indoor air pollution, fuel bills as well as time for cooking and wood collection for households. Other objectives include financially empowering participating women and youths by including them in project activities.
Project type: Energy/Land Use	Energy (Energy Efficiency)
For Renewable Energy Projects – intention to apply RECs Labels (y/n)	N/A
GS Stream (CDM/VER):	CDM
Scale (large/scale/micro):	small
GS Registration Date:	13.03.2012
GS Crediting period start date:	20.12.2012 - 19.12.2019
CDM Registration Date:	10.11.2011
CDM Crediting period start date:	10.11.2011
Project Developer:	atmosfair gGmbH
Project Representative:	atmosfair gGmbH
Project Participants and any communities involved:	atmosfair gGmbH, Lernen-Helfen-Leben e.V., Nigerian Developmental Association of Renewable Energies (DARE)
Host Country/Location:	Federal Republic of Nigeria
Methodologies applied:	AMS-II.G ver.3
SDG Impacts:	1 – Goal 5; Target 5.4; Indicator: Perception of savings on time spent on collection of fire wood and cooking. 2 – Goal 7; Target 7.1; Indicator: Increase in number of households predominantly using clean cooking devices such as Improved Cook Stoves 3 – Goal 8; Taget 8.5; Indicator: Number of new jobs created by sex 4- Goal 13; Target 13.2 + 13.b; Indicator: GHG emissions saved annually through the project as contribution to a low greenhouse gas emission development path of Nigeria

Estimated amount of SDG Impact (GSVERs and others)	

NOTE: *This Annex shall be used for all PoAs if the sustainable development assessment is conducted at PoA level. In case sustainable development assessment is conducted at activity level, then this Annex shall be filled for each of the activities.*

SECTION A Sustainable Development Goals (SDG) outcomes

A.1 Relevant target for each of the three SDGs

>> (Specify the relevant SDG target for at least each of three SDGs addressed by the project. Refer most recent version of targets here. Contribution to SDG 13 is mandatory to be demonstrated for all projects and activities. Contribution to SDG 7 is recommended to be demonstrated for all community service projects and activities)

SDG	Positive/ Neutral/ Negative	Chosen SDG Target	Indicator defined for the project	Justification Information
Goal 5 - Gender	Positive	5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Number of cooking demonstrations carried out.	Demonstrations on the use of ICS have training character and raise awareness about environmental and health problems due to fuel wood use. Women are especially targeted by the cooking demonstrations There will be a reporting form to be used by the distributors which will also record the number of female participants.
Goal 7 - Affordable and clean energy	Positive	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	1. Air Quality – Number of SAVE80 systems in use and results from spot checks conducted in user HH 2. Access to affordable and clean energy services - Change in traditional Fuel Consumption 3. Technology transfer and technological self-reliance	1. The project will disseminate clean cookstoves and thus reduce the emission of unhealthy indoor air pollution. 2. Access to energy efficient cookstoves which reduce fuel wood consumption will support the reduction in expenditures on fuel wood. The stoves disseminated within the frame of the project are sold to a reduced price, so that the technology gets affordable for local households. 3. The project will disseminate clean cookstoves to Nigeria Types, Number and nature

				(imported, assembled locally, produced locally) of the new stoce technology disseminated will be monitorined.
Goal 8 - Decent work and economic growth	Positive	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	1. Quantitative employment and income generation - Number of jobs created by the project activity, e.g. throu stove sales and marketing. 2. Quality of employment- Time needed for assembly of ICS (after training).	1. Creation of new jobs in the field of stoves construction, sales and maintenance as well as project monitoring. 2. This parameter was proposed by the stakeholders during the Stakeholder Consultation Meeting and found to be a suitable parameter by the PPs to measure changes after assemblers received training.
Goal 13 - Climate action	Positive	13.2 Integrate climate change measures into national policies, strategies and planning 13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	Amount of GHG emissions saved annually as contribution to a low greenhouse gas emission development path of Nigeria	Reduction of GHG emissions and mitigating climate change through the project activities

A.2 Explanation of methodological choices/approaches for estimating the SDG outcome

>> (Explain how the methodological steps in the selected methodology(ies) or proposed approach for calculating baseline and project outcomes are applied. Clearly state which equations will be used in calculating net benefit.)

According to AMS II.G., ver. 3, par. 15 and par. 16,

1. "Monitoring shall consist of checking the efficiency of all appliances or a representative sample thereof, at least once every two years (biennial) to ensure that they are still operating at the specified efficiency (η_{new}) or replaced by an equivalent in service appliance. Where replacements are made, monitoring shall also ensure that the efficiency of the new appliances is similar to the appliances being replaced.

2. Monitoring shall also consist of checking of all appliances or a representative sample thereof, at least once every two years (biennial) to determine if they are still operating or are replaced by an equivalent in service appliance."

A representative sample of the appliances disseminated under a CPA will be monitored to determine the share of appliances that are still operating at the specified efficiency. Where appliances are found to be operational but with a changed efficiency the actual efficiency determined in monitoring will be applied to calculate emission reductions. Replacement of appliances is monitored and the replaced devices will have same efficiency . The procedures for monitoring the share of operational appliances and their respective efficiency(ies) are laid out in section E.7.

3. Further, par. 17, 18 & 21 of the AMS II.G, ver. 3 are not applicable as they refer to options not chosen for this PoA:

4. Par. 17: "If the quantity of fuel saved is determined using the Kitchen Performance Test (i.e. paragraph 6, Option 1), monitoring shall ensure that fuel consumption during the period of the project activity is monitored annually. "

5. Not applicable as Option 2 of par. 6 is chosen to determine $B_{y,savings}$

6. par. 18 & 21: "If option (b) in paragraph 7 is chosen for determining B_{old}*, monitoring shall include the amount of thermal energy generated by the project technology t in year y."*

7. Not applicable as Option (a) of par. 7 is chosen to determine B_{old}

8. par. 19 reads:

9. "In order to assess the leakage described above, monitoring shall include data on the amount of woody biomass saved under the project activity that is used by non-project households/users (who previously used renewable energy sources). Other data on non-renewable woody biomass use required for leakage assessment shall also be collected."

10. par. 19 does not need to be considered for monitoring, as the net-to gross adjustment factor for L_{nrb} was used:

11. According to par. 20, monitoring shall ensure that:

12. "Either the replaced low efficiency appliances are disposed of and not used within the boundary or within the region; or

13. If baseline stoves continue to be used, monitoring shall ensure that the fuel-wood consumption of those stoves is excluded from B_{old}*."*

Monitoring of the proper disposal of old appliances is complicated, especially if the old appliance is a three stone fire, we choose option (b). The continuous use of baseline appliances will be excluded from B_y by determining the number of eaters per appliance during monitoring (see Section E 7.1)

A.3 Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

(Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the design certification and remain fixed throughout the crediting period like IPCC defaults and other methodology defaults. Copy this table for each piece of data and parameter.)

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	$B_{old,capita}$

Unit	t/year
Description	Average baseline fuelwood consumption per capita per year
Source of data	UN Statistics Database, Value for 2006; Nigeria Census Data 2006
Value(s) applied	0.692
Choice of data or Measurement methods and procedures	The United Nations Statistics Division has published fuelwood consumption figures for households in Nigeria. To arrive at the per capita consumption, this figure is divided by the total population in Nigeria. The population data is taken from official census. Both data are taken from the same, most recent year for consistency reason.
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	η_{old}
Unit	%
Description	Efficiency of the baseline system being replaced
Source of data	AMS II.G. (Ver. 3)
Value(s) applied	0.10
Choice of data or Measurement methods and procedures	According to AMS II.G., ver. 3, a default value of 0.10 can be used "if the replaced system is the three stone fire or a conventional system lacking improved combustion air supply mechanism and flue gas ventilation system i.e., without a grate as well as a chimney". See Section E.6.1
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	L_{NRB}
Unit	-
Description	Net-to-gross adjustment factor for NRB Leakage (fixed parametric value of 0.95,)
Source of data	AMS II.G. (Ver. 03)
Value(s) applied	0.95
Choice of data or Measurement methods and procedures	As per the methodology AMS II.G, ver. 3, a default value as provided under par. 13 can be optionally used to account for leakages, in which case surveys are not required. See Section E.6.1 for details.
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	L_{PoA}

Unit	-
Description	Net-to-gross adjustment factor for PoA Leakage (fixed parametric value of 0.95, AMS II.G. Default Value)
Source of data	AMS II.G. (Ver. 03)
Value(s) applied	0.95
Choice of data or Measurement methods and procedures	As per the methodology AMS II.G, ver. 3, a default value as provided under par. 23 can be optionally used to account for potential PoA leakages, in which case estimates of the leakage is not required. See Section E.6.1 for details.
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	$f_{NRB,y}$
Unit	-
Description	Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass
Source of data	FAO (2010): Global Forest Resource Assessment 2010, Country Report Nigeria, http://www.fao.org/forestry/20262-1-1.pdf
Value(s) applied	0.77
Choice of data or Measurement methods and procedures	Though the NRB assessment comes to the conclusion that 100% of the woody biomass available to the end users is none-renewable, since none of the three conditions outlined in the methodology AMS II.G., ver. 3, par. 9 are fulfilled and hence it cannot be shown that demonstrably renewable woody biomass exists, a lower factor is used to be conservative. See Section E.6.1 for details.
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	$NCV_{biomass}$
Unit	TJ/t
Description	Net calorific value of the non-renewable woody biomass that is substituted
Source of data	AMS II.G (Ver. 3)
Value(s) applied	0.015
Choice of data or Measurement methods and procedures	This is the IPCC default value for wood fuel as provided by AMS II.G (Ver. 03), par. 5
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	$EF_{projected\_fossilfuel}$
Unit	tCO_2/TJ
Description	Emission factor for the substitution of non-renewable biomass by similar consumers
Source of data	AMS II.G (Ver. 3)
Value(s) applied	81.6
Choice of data or Measurement methods and procedures	This is the IPCC default value as provided by AMS II.G, ver. 3, par. 5
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	***HH_CAP***
Unit	Number
Description	Maximum number of eaters possible per specific ICS as applied in the specific CPA
Source of data	Manufactures specifications
Value(s) applied	To be completed in any specific CPA DD.
Choice of data or Measurement methods and procedures	According to manufactures specifications
Purpose of data	Calculation of baseline emissions
Additional comment	

Relevant SDG Indicator	SDG indicator 13.2
Data/parameter	$\eta_{specified}$
Unit	%
Description	Efficiency of the system being deployed as per manufacturer specification
Source of data	Manufactures specifications
Value(s) applied	To be completed in any specific CPA DD
Choice of data or Measurement methods and procedures	According to manufactures specifications
Purpose of data	Note that $\eta_{specified}$ is the efficiency as per manufacturer specification for fulfilling eligibility criterion 2. This value will not be used for ex-post calculation of emission reductions since η_{new} is a monitored parameter to reflect possible changes in efficiency during the lifetime of the ICS.
Additional comment	

SECTION B Safeguarding Principles Assessment

B.1 Analysis of social, economic and environmental impacts

>> (Refer the GS4GG Safeguarding Principles and Requirements document for detailed guidance on carrying out this assessment. The assessment of following Safeguarding Principles Assessment is required to be carried out by GS Version 2.0, 2.1 and 2.2 projects. GS v1.0 projects will carry out assessment of all the safeguarding principles discussed in the GS4GG Safeguarding Principles and Requirements document.)

Safeguarding principles	Assessment questions	Assessment of relevance to the project (Yes/ potentially/ no)	Justification	Mitigation measure (if required)
Social & Economic Safeguarding Principles				
3.1.1 Human rights	Do the Project Developer and the Project disrespect internationally proclaimed human rights and are they complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights	Yes	The project is a voluntary action of the project developer and the partners. Users can freely decide if they want to buy a stove and thus be part of the project activity.	Not applicable
3.1.2 Human rights	The Project shall not discriminate with regards to participation and inclusion.	Yes	Users can freely decide if they want to buy a stove and thus be part of the project activity. They can also decide if they want to sell the charcoal and how much they want to sell. There is no diccrimination against any group being excluded from the possibility to buy a stove.	Not applicable
3.2.1 – Gender Equality and Women's Rights	Is there a possibility that the Project might reduce or put at risk women's access to or control of resources,	Yes	The project will significantly involve women in stove assembly and monitoring. Women will have full access to project resources, entitlements and benefits. Women and men	Not applicable

	entitlements and benefits?		will have equal access opportunities to the new stove sets.	
3.2.1 – Gender Equality and Women's Rights	Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)?	Yes	Among the project's main goals is decreasing women's burden of time spent on wood collection and cooking by reducing fuel wood consumption. Women will save time which they can utilize for other activities. Women and men will save economic resources since families' expenditure on fuel wood will decrease. Further, the risk of exposure to gender-based violence will reduce due to the reduction in fuel wood gathering time and distances travelled.	Not applicable.
3.2.1 – Gender Equality and Women's Rights	Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?	Yes	The project emphasizes a gender-sensitive design and planning. Women will be trained in stove assembly and monitoring of the stoves usage.	
3.2.1 – Gender Equality and Women's Rights	Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes	Yes	The project aims to involve women and men in the project activities by providing training on the implementation of the project and creating job opportunities for them. Both women and men in the project households are encouraged to make use of the project	Not applicable

	minority groups or landless peoples)?		technology and to take part in the training given. The project aims to improve the livelihood of the entire community. Discrimination of minority groups or landless people are not tolerated.	
3.2.1 – Gender Equality and Women's Rights	Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities?	Yes	Improved cook stoves will support the reduction of women's burden of firewood collection or purchase and time spent for cooking. Hence, women will have more time availability for other activities.	Not applicable.
3.2.1 – Gender Equality and Women's Rights	Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits?	Yes	The project will involve women in the project activities by providing training on the implementation of the project (stoves assembly, monitoring and project management) and women are empowered economically through the created job opportunities. Women and youths will be the main beneficiaries of the project. The project will therefore reduce the discrimination and exclusion of women in economic activities.	Not applicable.
3.2.1 – Gender Equality and Women's Rights	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services?	Yes	The project will not limit in any way women's ability to use, develop and protect natural resources. Women continue to have the possibility to use fuel wood for cooking. However, since less wood fuel will be required due to the use of the improved cook stoves and given that women are the main users of cook stoves, women will contribute towards	Not applicable

			protection of the natural forest cover.	
3.2.1 – Gender Equality and Women's Rights	Is there likelihood that the proposed Project would expose women and girls to further risks or hazards?	Yes	The project aims to disseminate improved cook stoves and reduce women's and girls' risk of exposure to gender-based violence by reducing the time spent in fuel wood collection. It has been experienced that during the collection of firewood, women are exposed to gender-based violence. Efficient Cook Stoves require less fuel wood and thus less time spent on fuel wood collection. Furthermore, the project stoves are much safer in use than the traditional stoves, therefore risks of burning body parts during cooking are minimized.	Not applicable
3.2.2 Gender Equality and Women's Rights	Does the Project directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women?	Yes	The project does not enhance or contribute to sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking. Through the project activity, the risk of exposure to gender-based violence will reduce due to the reduction in fuel wood gathering time and distances travelled.	Not applicable
			The project does not enhance or contribute to slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls. The project is a voluntary action. Users can	Not applicable

			freely decide if they want to buy a stove and thus be part of the project activity.	
			The project does not enhance or contribute to restriction of women's rights or access to resources (natural or economic).The project will involve women in the project activities by providing training on the implementation of the project (stoves assembly) and women are empowered economically through the created job opportunities. Women will be the main beneficiaries of the project. The project will therefore reduce the discrimination and exclusion of women in economic activities	Not applicable
			The project does recognise women's ownership rights regardless of marital status – adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources. The project will involve women in the project activities by providing training on the implementation of the project (stoves assembly) and women are empowered economically through the created job opportunities. Women will be the main beneficiaries of the project. The project will therefore reduce the discrimination and exclusion of women in economic activities	Not applicable
3.2.3 Gender Equality and	3. Projects shall apply the principles of	Yes	The project will involve women in the project activities by	Not applicable

Women's Rights	nondiscrimination, equal treatment, and equal pay for equal work.		providing training on the implementation of the project (stoves assembly) and women are empowered economically through the created job opportunities. Women and youths will be the main beneficiaries of the project. The project will therefore reduce the discrimination and exclusion of women in economic activities.	
3.2.4 Gender Equality and Women's Rights	The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks.	Yes	According to the National gender strategy of Nigeria (http://www.aacoalition.org/national_policy_women.htm#iq_7): "The overall goal is to build a just society devoid of discrimination, harness the full potentials of all social groups regardless of sex or circumstance, promote the enjoyment of fundamental human rights and protect the health, social, economic and political well being of all citizens in order to achieve equitable rapid economic growth; evolve an evidence based planning and governance system where human, social, financial and technological resources are efficiently and effectively deployed for sustainable development." The project will involve women in the project activities by providing training on the implementation of the project (stoves assembly) and women are empowered economically through the created job opportunities. Women and	Not applicable

			youths will be the main beneficiaries of the project. The project will therefore reduce the discrimination and exclusion of women in economic activities	
3.3 Community Health, Safety and working conditions	The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community.	Yes	The project is a household based clean cookstove project. Thus no increased health risks or negative affects on the workers or the community is expected. To the contrary, the clean cookstoves will improve air quality by reducing indoor air pollution while cooking. Also the project does not adversely influence the health of workers. Savety provisions are taken for the assembly of the cookstoves.	Not applicable
3.4.1 Sites of Cultural and Historical Heritage	Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)?	No	The project is a household based clean cookstove project, thus the Project does not involve or be complicit in the alteration, damage or removal of any sites, objects or structures of significant cultural heritage. Cooking habits and dishes do not need to change.	Not applicable
			The Project does not proposes to utilise Cultural Heritage, including the knowledge, innovations, or practices of local communities.	Not applicable
			The project is a household based clean cookstove project, thus sharing of benefits from commercialisation of knowledge, innovation, or practice, consistent with their	Not applicable

			customs and traditions is not applicable.	
3.4.2 Froced Eviction and Displacement	Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The project is a household based clean cookstove project, thus no the physical or economic relocation of peoples (temporary or permanent, full or partial) is required.	Not applicable
3.4.3 - Land tenure and Other rights	Does the Project require any change to land tenure arrangements and/or other rights?	No	The project is a household based clean cookstove project, thus no change to land tenure arrangements and/or other rights is required.	Not applicable
	For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership?	No	Not applicable since the project does not involve land-use tenure, access or usage rights.	Not applicable
3.4.4 Indigenous Peoples	Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No	The project is a household based clean cookstove project. Possession of land and rights to possess land will not change due to the project activity. There is no discrimination against indigenous people regaring the participation in the project. Everybody, including indigenous people can freely choose to buy a cookstove and thus participate in the project.	Not applicable
3.5 Corruption	Does the Project engage in, contribute to or reinforce corruption of any kind.	Yes	The Project does not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	Not applicable
3.6.1 Labour rights	1. The Project Developer shall ensure that there is no forced labour and	Yes	The project does not involve and is not complicit in any form of forced or compulsory labour. The project participants do not	Not applicable

	that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard.		complicit in any form of forced or compulsory labour.	
	2. Workers shall be able to establish and join labour organisations.	Yes	Employee of the project is free to associate with whomever he wants. All project participants are non-profit. Lernen Helfen Leben members commit their time and participation at the project completely voluntary. Members from DARE and atmosfair are paid for their work; however, they are not forced to do anything beyond what's in their contracts.	Not applicable
	3. Working agreements with all individual workers shall be documented and implemented. These shall at minimum comprise: (a) Working hours (must not exceed 48 hours per week on a regular basis), AND	Yes	Employees of the project will have working contracts with the local partners in the project country. The contracts will be according to the national regulations.	Not applicable

	(b) Duties and tasks, AND (c) Remuneration (must include provision for payment of overtime), AND (d) Modalities on health insurance, AND (e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND (f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.			
	4. The Project Developer shall justify that the employment model applied is locally and culturally appropriate.	Yes	Employees of the project will have working contracts with the local partners in the project country. The contracts will be according to the national regulations and is thus locally and culturally appropriate.	Not applicable
	5. Child labour, as defined by the ILO Minimum Age Convention is not allowed. The Project Developer shall use adequate and verifiable mechanisms for age verification in recruitment procedures. Exceptions are children for work on their families' property as long as:	Yes	Project participants and all involved parties do not employ children.	Not applicable

	(a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND (b) The tasks they perform do not harm their physical and mental development, AND (c) The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.			
	6. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.	Yes	The project participants will provide appropriate equipment for assembly of the stoves as well as savety material (gloves, first aid kit). The project partneres will provide and document training of workers employeed in the project.	Not applicable
3.6.2 – Negative economic consequences	1. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period	Yes	The project is financially viable and component activities have been successfully implemented. The additional component activities will be implemented under the same economic model. The project's financial sustainability is ensured through the sale of cook stoves and the generation and sales of carbon credits. Those income streams are used for implementing the project. Revenues will be used to	Not applicable

			finance the technology costs and implementation costs. No risks are foreseen for the local economy through the realisation of the project.	
	2. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken into account in Project design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalised social 12 groups in targeted communities and that benefits are socially-inclusive and sustainable.	Yes	No risks are foreseen for the local economy through the realisation of the project, since stoves are not distributed for free but need be purchased by the users.	Not applicable
Environmental & Ecological Safeguarding Principles				
4.1.1 – Climate and Energy Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	Yes	The project does not lead to an increase in greenhouse gas emissions above the baseline emissions. The efficient cook stoves will reduce the release of CO_2 emissions compared to the traditional three stone fires.	Not applicable.
4.1.2 – Climate and Energy Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that	No	The project does not use energy from the local grid or power supply that is also being used by other users; hence it does not affect the availability and reliability of energy supply to other users.	Not applicable

	provides for other local users?			
4.2.1 – Water Impact on Natural Water Pattern/Flows	Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	The project will not have any impact on the water resources in the region. Thus natural or pre-existing patterns of watercourses, ground-water and watersheds will not be affected. No water usage is required in the project implementation.	Not applicable
4.2.2 - Water Erosion and/or Water Body Instability	Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?	No	The project reduces the wood fuel consumption and hence protects the natural forest cover. Therefore, erosion will indirectly be reduced and water body stability supported.	Not applicable
4.2.2 - Water Erosion and/or Water Body Instability	Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	Not relevant, see above.	Not applicable
4.2.3 - Environment, ecology and land use Landscape , Modification and Soil	Does the Project involve the use of land and soil for production of crops or other products?	No	The project does not involve the use of land and soil for any production.	Not applicable
43.2 – Environment, ecology and land use Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or	No	The project will not lead to any land use changes and has no impact on the land within the project area. Therefore vulnerability to natural or manmade hazards is not expected as a result of the project implementation.	

	other extreme climatic conditions?			
4.3.3 – Environment, ecology and land use Genetic Resources	Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?	No	The project focuses on the distribution of improved cook stoves, therefore this question is not relevant for this project.	Not applicable
4.3.4 – Environment, ecology and land use Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	No	All GHG emissions release through the project activity are accounted for in the project design, scenarios and the monitoring of the project. No other pollutants will be released to the environment by the project activity.	Not applicable
4.3.5– Environment, ecology and land use Hazardous and non-hazardous waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The project will not involve the usage of hazardous chemicals and materials.	Not applicable
4.3.6 – Environment, ecology and land use Pesticide and Fertiliser	Will the Project involve the application of pesticides and/or fertilisers?	No	The project does not involve the application of pesticides and fertiliser.	Not applicable
4.3.7 – Environment, ecology and land use Harvesting of forests	Will the Project involve the harvesting of forests?	No	The project will reduce fuel wood demand and the harvest rate of forests. Therefor the project has a positive impact on the forest cover.	Not applicable

4.3.8 – Environment, ecology and land use Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	Neither will the project impact the growing of food nor the nutritional quality of the food. The project is not related to food production or food supply in any way and thus doesn't have any influence on the mentioned factors.	Not applicable.
4.3.9 – Environment, ecology and land use Animal husbandry	Will the Project involve animal husbandry?	No	The project does not involve animal husbandry.	Not applicable

SECTION C Monitoring plan

C.1 Data and parameters to be monitored

(Include specific information on how the data and parameters that need to be monitored in the selected methodology(ies) or proposed approaches or as per mitigation measures from safeguarding principles assessment or as per feedback from stakeholder consultations would actually be collected during monitoring. Copy this table for each piece of data and parameter.)

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 13.2
Data / Parameter	$N_{eaters,appliance}$
Unit	-
Description	Average number of eaters per appliance
Source of data	Primary data collection: dedicated monitoring team; database maintenance: managing entity
Value(s) applied	Monitored. The value will be between 0 and HH_CAP: $0 \leq N_{eaters appliance} \leq HH\_CAP$ For ex-ante estimate in the CPA DD, HH_CAP will be used.

Measurement methods and procedures	Monitoring of the statistically adjusted average number of eaters involves two steps: Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA. Step 2: Calculation of the average number of eaters at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a homograde test of independent units that have a standard normal distribution. The average number of eaters will be determined through interviews performed by a dedicated monitoring team. Interviews will be reported in a questionnaire. Interviews are conducted until the required precision for this parameter is achieved. All questionnaires and information gathered during the sampling by the monitoring team are handed over to the managing entity that takes care of entering the information to an electronic database and updating databases where appropriate. By determining the average number of eaters per appliance, the continuous use of the baseline appliance is considered as only the baseline consumption which is reduced by the project appliance is considered.
Monitoring frequency	Annual or biennial
QA/QC procedures	All formulas applied to determine the statistical precision used are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted (*"…the lower bound of a […] confidence interval of the parameter value may be chosen"*) in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Calculation of emission reductions
Additional comment	

Relevant SDG Indicator/Safeguarding Principle	SDG Indicator 13.2 and 7.1
Data / Parameter	N_y
Unit	-
Description	Adjusted total number of appliances deployed until period y
Source of data	Sales Records Database
Value(s) applied	monitored

Measurement methods and procedures

The total number of appliances deployed until period y is calculated based on information monitored through the sales records database.

$$N_y = \sum_{i=1}^{y} n_i \cdot OT_{adjusted,i,y}$$

Parameter	Unit	Description
n_i	-	Number of appliances deployed in period i as reported in the sales records database and adjusted to account for delays between sales date and first use. Every appliance starts to operate (deployment date) in the month following the month in which the appliance was sold.
$OT_{adjust,i,y} = \begin{cases} 1 & ,i < y \\ \frac{d_{averagey}}{mp_{length}} & ,i = y \end{cases}$	-	Adjustment factor for reduced operational time of appliances deployed in monitoring period y, whereas i = 1, …, y. For all appliances deployed in the periods *i* prior to Monitoring period *y*, the adjustment factor is 1.
$d_{average,y}$	days	Average number of days that appliances deployed in period y have been operational in period y as determined by respective deployment dates of appliances counted for n_y . Deployment dates are determined mutatis mutandis as in the context of n_i above.
mp_{length}	days	Length of monitoring period y

Monitoring frequency	Annual or biennial
QA/QC procedures	Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Calculation of emission reductions
Additional comment	Type of the stove will also be monitored via sampling approach or documented evidences, and in case any deployed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation.

Relevant SDG Indicator/Safeguarding Principle	SDG Indicator 13.2 and 7.1
Data / Parameter	DO_y
Unit	%
Description	Statistically adjusted drop out from total population of appliances in period y Drop out means that the ICS are either not used, outside of the project boundary (i.e. outside Nigeria) or damaged beyond repair.
Source of data	Primary data collection: dedicated monitoring team; database maintenance: managing entity
Value(s) applied	monitored
Measurement methods and procedures	Monitoring of the statistically adjusted drop out involves two steps: Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2 Step 2: Calculation of the adjusted drop out rate at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a homograde test of independent units that have a standard normal distribution. The Drop outs will be determined through interviews where it will be checked if the appliances are still operational, performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2. Interviews will be reported in a questionnaire. Checks are conducted until the required precision for this parameter is achieved. All questionnaires and information gathered during the sampling by the monitoring team are handed over to the managing entity that takes care of entering the information to an electronic database and updating databases where appropriate.
Monitoring frequency	Annual or biennial
QA/QC procedures	All formulas applied to determine the statistical precision used are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted ("*…the lower bound of a […] confidence interval of the parameter value may be chosen"*) in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later. A traceable "identity check" of the appliances visited during sampling shall be performed and recorded (e.g. a picture of the appliance clearly showing its serial no., etc.).
Purpose of data	Calculation of emission reductions
Additional comment	

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 13.2
Data / Parameter	η_{new}
Unit	%
Description	Adjusted average efficiency of the system being deployed
Source of data	Primary data collection: dedicated monitoring team; database maintenance: managing entity
Value(s) applied	Monitored. The value will be between 0 and $\eta_{specified}$: $0 \leq \eta_{new} \leq \eta_{specified}$ For ex-ante estimate in the CPA DD, $\eta_{specified}$ will be used.
Measurement methods and procedures	Monitoring of the statistically adjusted average efficiency involves two steps: Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA. Step 2: Calculation of the average efficiency at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a heterograde test of independent units that have a standard normal distribution. η_{new} is determined following the Water Boiling Test (WBT), performed by a dedicated monitoring team. Tests will be reported in spreadsheet templates. Checks are conducted until the required precision for this parameter is achieved.
Monitoring frequency	Annual or biennial
QA/QC procedures	All formulas applied to determine the statistical precision are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted ("*…the lower bound of a […] confidence interval of the parameter value may be chosen"*) in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later. A traceable "identity check" of the appliances visited during sampling shall be performed and recorded (e.g. a picture of the appliance clearly showing its serial no., etc.). Cross-checks: The monitoring team will cross-check results with the efficiency as determined at CPA inclusion stage. Additionally, literature values may also be used to compare the results.
Purpose of data	Calculation of emission reductions
Additional comment	

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 5.4
Data / Parameter	**Human and institutional capacity**
Unit	number
Description	Number of cooking demonstrations carried out. There will be a reporting form to be used by the distributors which will also record the number of female participants. Explanation: Demonstrations on the use of ICS have training character and raise awareness about environmental and health problems due to fuel wood use. Women are especially targeted by the cooking demonstrations
Source of data	Recording number of cooking demonstrations.
Value(s) applied	Monitored.
Measurement methods and procedures	Recording number of cooking demonstrations.
Monitoring frequency	Annual or biennial
QA/QC procedures	Monitoring is carried out by trained staff. They are supervised by a local CDM Monitoring Officer. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Establish information on Human and institutional capacity
Additional comment	

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 7.1
Data / Parameter	**Air quality**
Unit	number
Description	Number of ICS in use/ disseminated
Source of data	Sales records (Database), Sample survey will include question on improvement of air quality.
Value(s) applied	100% of the distributed stoves
Measurement methods and procedures	Monitoring questionnaire including the question if the user perceives better air quality.
Monitoring frequency	Annual or biennial
QA/QC procedures	Monitoring is carried out by trained staff. They are supervised by a local CDM Monitoring Officer. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Establish information on improvement of air quality
Additional comment	

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 7.1
Data / Parameter	**Access to affordable and clean energy services**
Unit	1. kg 2. number
Description	Two parameters are chosen to monitor the access to affordable and clean energy services: 1. Change in traditional fuel consumption (fuelwood savings). 2. Discounted price for end user as incentive mechanism for the discontinued use of the baseline stove.
Source of data	. Primary data collection: dedicated monitoring team 2. Sample sales receipts, cost calculation stoves
Value(s) applied	1. fuel wood savings can go up to 80% 2. e.g. Save80 stove: 72.40 Euro / 78.89* Euro
Measurement methods and procedures	1. B) Fuelwood savings (t) = Change in traditional fuel consumption $B_{y,savings} = B_{old} \cdot (1 - \frac{\eta_{old}}{\eta_{new}})$ 2. Comparison between actual sales price and economic price for the stove. of marketin
Monitoring frequency	Annual or biennial
QA/QC procedures	All formulas applied to determine the statistical precision used are standard formula. Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted ("...the lower bound of a [...] confidence interval of the parameter value may be chosen") in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Establish information on Access to affordable and clean energy services
Additional comment	*Costs for assembly, marketing and distribution are not shown here because landed costs in Kaduna are already higher than the sales price

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 7.1
Data / Parameter	**Technology transfer and technological self-reliance**
Unit	number

Description	1. Types, Number and nature (imported, assembled locally, produced locally) of ICS disseminated / in use 2. Shift of production steps to Nigeria
Source of data	1. Sales records (Database) 2. Report about the status of shift of production steps
Value(s) applied	1. ICS numbers will depend on implementation schedule, thus future target is unknown. 2. Assembly is done in Nigeria
Measurement methods and procedures	Documentaton of stoves sold in the project database.
Monitoring frequency	Annual or biennial
QA/QC procedures	Monitoring is carried out by trained staff. They are supervised by a local CDM Monitoring Officer. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Establish information on Technology transfer and technological self-reliance
Additional comment	Full production will be in Nigeria (long term target) Intermediate targets; 1. assembly and folding is done in Nigeria 2. cutting, folding and assembly is done in Nigeria Note: It is hoped that the stoves will one day be fully made in Nigeria but due to the lack of available and reasonably priced materials and high tech tools (in particular stainless steel, laser cutters, etc.) in Nigeria, this will most likely be in the long term.

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 8.5
Data / Parameter	**Quality of employment**
Unit	time
Description	Time needed for assembly of ICS (after training). Explanation: This parameter was proposed by the stakeholders during the Stakeholder Consultation Meeting and found to be a suitable parameter by the PPs to measure changes after assemblers received training. However, please note that the PoA may implement different stove types, and not all of them will require assembly, this parameter can only be assessed for the stove types that require assembly.
Source of data	Recording time of 3 assemblies
Value(s) applied	Monitored.
Measurement methods and procedures	Recording time of 3 assemblies
Monitoring frequency	Annual or biennial

QA/QC procedures	Monitoring is carried out by trained staff. They are supervised by a local CDM Monitoring Officer. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Establish information on improvement of quality of employment
Additional comment	

Relevant SDG Indicator/Safeguarding Principle	SDG indicator 8.5
Data / Parameter	**Quantitative employment and income generation**
Unit	Number
Description	Number of jobs created. Explanation: PoA will provide job opportunities in various areas such as distribution, monitoring and after sales. There will be a reporting form to be used by the distributors which will also record the employment status, e.g. permanent, part time, freelance, piece rate).
Source of data	Staff figures reported by the distributors
Value(s) applied	Monitored.
Measurement methods and procedures	Staff figures reported by the distributors
Monitoring frequency	Annual or biennial
QA/QC procedures	Monitoring is carried out by trained staff. They are supervised by a local CDM Monitoring Officer. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period. Data will be collected using the standard procedures and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.
Purpose of data	Establish information on Quantitative employment and income generation
Additional comment	

C.1.1 Other elements of monitoring plan (if applicable)

>>

Additional aspects from Stakeholder Consultation

- The monitoring reports will include updates on the potential impact on wood sellers based on a qualitative assessment (e.g. integration of fuelwood traders into the fuel supply chain of the Save80, training as assemblers)
- The monitoring reports will also include updates on the exchange of the CME with other organisations and institutes regarding the PoA and its CPAs during the monitoring period.
- The monitoring reports will also report about design changes (e.g. increasing the size of the Save80 stove) if applicable.

Safety instructions

Quality of employment mitigation measure:

The CME provides safety instructions for distribution to workers or use as poster for workshop walls. This will be reported in the monitoring report.SECTION D Duration and crediting period

D.1 Duration of project

D.1.1 Start date of project

>> *(Specify start date of the project, in the format of DD/MM/YYYY)*

13/03/2012

D.1.2 Expected operational lifetime of project

>> (*Specify in years)*

28 years

D.2 GS Crediting period of the project/activity

D.2.1 Start date of the ongoing GS crediting period

>>

20.12.2012

D.2.2 End date of the ongoing GS crediting period

>>

19.12.2019

D.2.3 Total length of the GS crediting periods

>> *(Specify the total length of crediting period in years in line with GS4GG Principles & Requirements or relevant activity requirements)*

7 years

SECTION E Stacking of new assets

>> *(If project is looking to stack new assets over GSVERs the required information to demonstrate compliance to the relevant methodology, product specification and additionality shall be presented in the new PDD template launched with GS4GG)*

N/A

Appendix 1. Contact information of project participants

Organization name	atmosfair gGmbH
Registration number with relevant authority	
Street/P.O. Box	Zossener Straße 55-58
Building	Aufgang D, 6. OG
City	Berlin
State/Region	Berlin
Postcode	10961
Country	Germany
Telephone	+49 30 1208480-63
Fax	+49 30 1208480-29
E-mail	projekte@atmosfair.de
Website	www.atmosfair.org
Contact person	Dr. Katrin Mikolajewski
Title	CDM Project Developer
Salutation	
Last name	Mikolajewski
Middle name	
First name	Katrin
Department	CDM Project Development
Mobile	
Direct fax	+49 30 1208480-29
Direct tel.	+49 30 1208480-64
Personal e-mail	mikolajewski@atmosfair.de