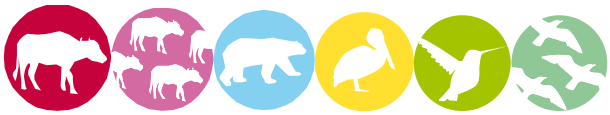
GOLD STANDARD PASSPORT

CONTENTS



SECTION A. Project Title

Title: *Buenos Aires Renewable Energy Project*

Date: 18/11/2013

Version no.: 05

SECTION B. Project description

This project activity was developed by Carbono Social Serviços Ambientais LTDA. (Social Carbon Company), which has changed its company name to Sustainable Carbon – Projetos Ambientais LTDA.

The project activity is the project of *Buenos Aires* Ceramic, which is a red ceramic factory located in *Buenos Aires* municipality, State of *Pernambuco*, northeast region of Brazil. The ceramic factory produces bricks and flagstones, destined mainly for the regional market in *Pernambuco*.

Before August 2008, *Buenos Aires* Ceramic production process encompasses three Hoffman[1] kilns which operated using exclusively native firewood (wood without sustainable forest management) from *Caatinga* Biome as fuel. In the beginning of August, 2008 the ceramic company started testing renewable biomass using coconut residues in the Hoffman kilns.

The complete fuel switching, from non-renewable biomass to renewable biomass occurred in January 01st, 2009 when the ceramic factory stopped employing native wood and started using sustainable forest management and glycerin in the Hoffman kilns. Currently Buenos Aires ceramic uses only native wood with sustainable forest management and Algaroba wood. Furthermore, by the end of 2013 the ceramic factory will have finished the construction of a dryer in order to dry the ceramic pieces before the burning process. Before that, the ceramic factory dried its ceramic pieces naturally.

It is important to state that, the fuel switching was not expected in absence of the project activity, once there were no incentives to support the fuel switching. According to the Brazilian Environmental Ministry the *Caatinga* biome has a high annual deforestation rate, reaching 0,28% in Brazil[2]. Also, the common practice in the project region is the use of non-renewable native wood[3].

The main goal of this project activity is to minimize the negative impacts of deforestation to obtain firewood, whose consumption also leads to GHG emissions that contribute to climate change. Moreover, in opposition to the identified baseline, the project activity will generate thermal energy exclusively from renewable sources, by using abundant renewable biomasses in the region. All these

[1] Hoffmann kilns are the most common kiln used in production of bricks and some other ceramic products. This type of kiln is normally divided in small chambers (or "lines"), all linked by a central gas collector. Hoffman kiln has parallel columns where the heat from one line is used in the next, therefore recycling the generated heat in the previous lines. These kilns have a funnel on top, which is used to feed fuel directly in the burning chamber.

[2] BRASIL. Ministério do Meio Ambiente (MMA). Projeto de monitoramento do desmatamento nos biomas brasileiros por satélite (PMDBBS). Brasília, 2012. Available at: <http://www.mma.gov.br/florestas/controle-e-prevenção-do-desmatamento>. Last visited on: 18/04/2013.

[3] Programas de Ação Estadual de Combate à Desertificação e Mitigação dos Efeitos da Seca (PAEs). "Desmatamento na Caatinga já destruiu metade da vegetação original". Available at: <http://paenordeste.blogspot.com.br/2010/03/desmatamento-da-caatinga-e-do-cerrado.html>. Last visited on: 15/04/2013.

measures contribute to sustainable development by promoting renewable energy, mitigating atmospheric pollution and improving the quality of employment for the ceramic workers.

Project start date: The project start date is defined as the date when the project proponent began employing renewable biomass. This has occurred on 01/08/2008. In addition, the project is applying for Gap Analysis from VCS and SOCIALCARBON® Standard to Gold Standard according to Gold Standard Toolkit Section 1.2.7.

SECTION C. Proof of project eligibility

C.1. Scale of the Project

Please tick where applicable:

Project Type	Large	Small
	☐	☐
	☐	☐
	☐	☐
	☐	✔
	☐	☐
		☐

C.2. Host Country

The host country is Brazil.

C.3. Project Type

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	✔	☐
Does your project activity classify as an End-use Energy Efficiency Improvement project?	☐	✔
Does your project activity classify as waste handling and disposal project?	☐	✔

Please justify the eligibility of your project activity:

The project is in compliance with Gold Standard eligibility criteria, as per Section 1.2 of the GS Toolkit v.2.2 and also the additional specific eligibility criteria detailed in Annex C. Furthermore, the project satisfies all applicability conditions of the following small-scale methodology approved under the Clean Development Mechanism: "**AMS-I.E: Switch from Non-Renewable Biomass for Thermal Applications by the User**", version 05[4], valid from 03/08/2012 onwards. Project eligibility is further detailed in Table 03 of the Gap Analysis Report.

This category comprises activities to displace the use of non-renewable biomass by introducing renewable energy technologies. The technology in case of this project activity is determined as the ceramic factories, which utilize thermal energy generated by the new renewable energy technology.

The main focus of this Project is to allow the substitution of native firewood (non-renewable woody biomass) with renewable biomass as source of thermal energy, thus reducing GHG emissions and discouraging deforestation to obtain firewood. Therefore, the project activity fits in the Renewable Energy Supply category as it generates energy from non-depletable energy sources (renewable biomasses). It is possible that the project's implementation results in an improvement of the ceramic

[4] Methodology available at: <http://cdm.unfccc.int/methodologies/DB/WHTQUFLWCVNB9CIUZC198A712WGQR4/view.html>. Last visited on: 18/04/2013.

energy efficiency, however it is not considered in the project activity.

The project also fits in the following category of Annex C[5] of the Gold Standard Toolkit version 2.2[6]: "*Electricity and/or heat, and liquid biofuels from biomass resources*", since the project generates heat from biomass resources.

The project is capable of generating real, measurable and verifiable emission reductions due to fuel switch to renewable biomass. All measures are considered additional to the common practice and are not mandated by any laws or regulations.

Furthermore, the project will use exclusively demonstrably renewable biomasses whose source can be verified and is expected to involve equipments with thermal output of less than 45 MW thermal.

Pre Announcement	Yes	No
Was your project previously announced?	☐	✔

Explain your statement on pre announcement

The Project has not been previously announced to go ahead without the revenues from carbon credits. Buenos Aires ceramic was aware of the benefits of the voluntary carbon market when it decided to invest in the Project measures (fuel switching to renewable biomass). Buenos Aires ceramic co-developed a similar Project under the Verified Carbon Standard (VCS) with Sustainable Carbon. Measures to ensure revenues from carbon credits started on 17/07/2008 (before the ceramic switched to renewable biomass), when Buenos Aires ceramic and Sustainable Carbon signed a contract for the development of a voluntary emission reduction Project.

Such Project (entitled Buenos Aires Ceramic Fuel Switching Project) also involved fuel switching from non-renewable biomass to renewable biomass, and was registered under the VCS. The Project was validated in April 2010 and has issued 67,017 tCO_2e from 01/01/2010 to 29/02/2012, in the first monitoring period.

The successful experience with the carbon market has encouraged the ceramic owner to apply the Project under the Gold Standard, with the aim to ensure the successful continuation of the Project. Under the Gold Standard, the Project crediting period starts on 01/03/2012, and ends on 31/12/2019. Table below summarizes the Buenos Aires projects events.

Date	Event
July 17th, 2008	Buenos Aires ceramic and Sustainable Carbon signed a contract for the development of a voluntary emission reduction project applying for Verified Carbon Standard and SOCIALCARBON Standard®. By this time, the ceramic factory was employing non-renewable wood as fuel in the

[5] Annex C available at: <http://www.cdmgoldstandard.org/wp-content/uploads/2012/05/v2.2_ANNEX-C.pdf>. Last visited on 18/04/2013.
[6] Toolkit available at:<http://www.cdmgoldstandard.org/wp-content/uploads/2012/06/GSv2.2_Toolkit.pdf>. Last visited on 16/04/2013.

	kilns.
August 01st, 2008	Buenos Aires ceramic begins tests with renewable biomass, such as coconut residues, in the kilns. This data is defined as the project start date of the project activity under the VCS and SOCIALCARBON® application.
January 01st, 2009	The ceramic factory completed fuel switching from non-renewable biomass to renewable biomass. It started using wood from sustainable forest management plan and glycerin.
January 01st, 2010	Buenos Aires Ceramic Fuel Switching Project crediting period start date under VCS and SOCIALCARBON application. In April 2010 the project was validated.
March 15th, 2013	The project, under the VCS has issued 67,017 tCO_2e from 01/01/2010 to 29/02/2012, the first monitoring period.
January, 2013	The project activity started Gap Analysis from VCS and SOCIALCARBON to Gold Standard, via a gap analysis process. Applying to Gold Standard, the project crediting period starts on 01/03/2012, and ends on 31/12/2019.

C.4. Greenhouse gas

Greenhouse Gas	
Carbon dioxide	✔
Methane	☐
Nitrous oxide	☐

C.5. Project Registration Type

Project Registration Type	
Regular	☐

Pre-feasibility assessment	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	✔	☐	☐

If Retroactive, please indicate Start Date of project activity: 01/08/2008

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

Buenos Aires Municipality	Coordinates
Latitude	07° 58' 00" S
Longitude	37° 37' 59" W

Explain given coordinates

These coordinates indicate the main entrance to the ceramic factories included in the project.

D.2. Map

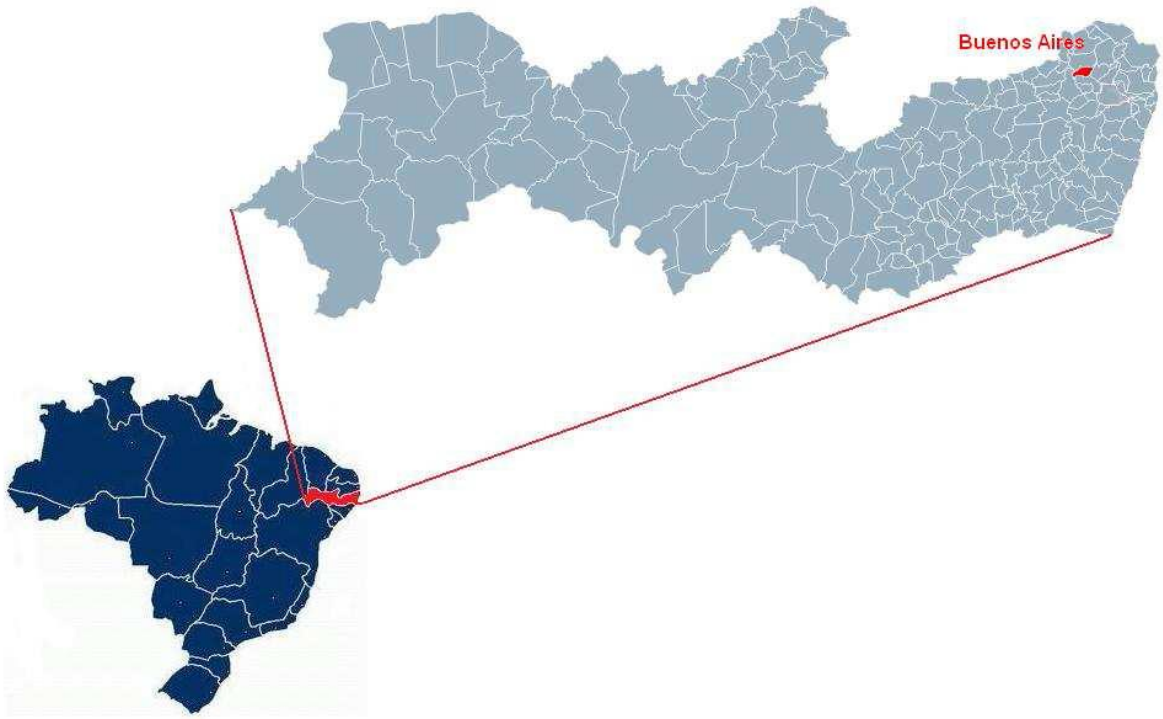


Figure 1. Geographic location of the project activity.

SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

[See Local Stakeholder Consultation Report B.5 and insert table from "C.3.iii Assessment of all comments". Insert a summary of alterations based on comments]

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
C1: Involve ceramic's workers, in order to give them more information about the project.	No	Project proponents have followed Gold Standard Procedures for the stakeholder consultation. Sustainable Carbon has made invitations by e-mail and letter.
C2: The project could be improved and expanded through more divulgation at local media.	No	Project proponents have followed Gold Standard Procedures for the stakeholder consultation. Sustainable Carbon has made invitations by e-mail and letter.

C3: Capacity building and income generation.	No	The project will monitor the income generation, as described in the GS Passport in the Sustainability Monitoring Plan: "Quantitative employment and income generation" indicator.
C4: It could support the use of more efficient technologies in the ceramic productive process, for example in the ceramic kilns and chimney.	No	The project activity displaces the use of non-renewable biomass by introducing renewable energy technologies. The technology in case of this project activity is determined as the ceramic facilities, which utilize thermal energy generated by the new renewable energy technology.
C5: The distribution of the benefits from carbon credits should be clear (indirect and direct benefits).	No	The carbon credits will bring direct benefits to Buenos Aires ceramic and Sustainable Carbon, both project participants. However, the project will monitor the additional revenues for biomass suppliers, comparing projected baseline fuel cost with the renewable biomass cost. This parameter is an indicator of project's Sustainability Monitoring Plan. Such additional revenues for biomass suppliers is considered an indirect benefit deriving from the carbon credits.
C6: I do not know. I cannot give my opinion.	No	No changes on the project are required due to such comment.
C7: It should give more incentives to the biomass providers, in order to enhance native wood management areas.	No	The project predicts the monitoring of additional revenues for biomass suppliers, comparing projected baseline fuel cost with the renewable biomass cost. It is a parameter of project's Sustainability Monitoring Plan. The fuels applied by the project are more costly on an energy basis than the baseline non-renewable fuel, thus the project gives benefits to biomass providers.
C8: Reuse of steam and control of clay use.	No	It is not possible for Buenos Aires ceramic to reuse steam in the production process. Regarding the clay use, the ceramic has all the environmental licenses required for the clay extraction and use.
C9: The project is good only in the sustainable development aspects.	No	No changes on the project are required due to such comment.

C10: The project could be improved in case it was announced to other local companies. It could have been better announced.	No	Project proponents have followed Gold Standard Procedures for the stakeholder consultation. Sustainable Carbon has made invitations by e-mail and letter.
C11: Investment, practice and security in what was done and will be done.	No	No changes on the project are required due to such comment.
C12: The project could involve other local ceramics factories, not only Buenos Aires ceramic.	No	No changes on the project are required due to such comment.
C13: The project is great. Although it could perform a biomass study for each client.	No	Sustainable Carbon will develop a biomass surplus study specific for Buenos Aires project. The scope of this project does not include developing studies of biomass availability as fuel switching options to other users.
C14: The project could contribute to development of biomass studies, in order to provide fuel switching options for other users.	No	Sustainable Carbon will develop a biomass surplus study specific for Buenos Aires project. The scope of this project does not include developing studies of biomass availability as fuel switching options to other users.
C15: The project could be improved in regard to the way it was announced	No	Project proponents have followed Gold Standard Procedures for the stakeholder consultation. Sustainable Carbon has made invitations by e-mail and letter.
C16: It could avoid every type of industrial activities responsible to global warming.	No	No changes on the project are required due to such comment.
C17: It displays weakness in the monitored indicators related to origin of renewable biomass used as fuel. Attention should be given to the providers of wood from management areas.	Yes	The origin of the renewable biomass will be monitored following documents from the biomasses providers, thus allowing determining its origin. The biomasses shall be considered renewable as fulfilling definitions of renewable biomass approved by the Clean Development Mechanism and the Gold Standard Foundation. Furthermore, in response of this comment, Sustainable Carbon will incorporate improvements procedures in the monitoring of origin of renewable biomass used by the

		project.
C18: It should appoint other fuel alternatives, which is not easily feasible.	No	No changes on the project are required due to such comment.
C19: It should include other meetings to the local community in order to provide more information about the project and its contribution to the society.	Yes	Sustainable Carbon and Buenos Aires ceramic intend to schedule other meetings in order to provide more information about the project.
C20: Speed and agility.	No	No changes on the project are required due to such comment.
C21: No suggestions	No	No changes on the project are required due to such comment.
C21: No suggestions	No	No changes on the project are required due to such comment.
C23: No suggestions	No	No changes on the project are required due to such comment.
C24: No suggestions	No	No changes on the project are required due to such comment.
C25: No suggestions	No	No changes on the project are required due to such comment.
C26: No suggestions	No	No changes on the project are required due to such comment.
C27: No suggestions	No	No changes on the project are required due to such comment.
C28: No suggestions	No	No changes on the project are required due to such comment.
C29: No suggestions	No	No changes on the project are required due to such comment.
C30: No suggestions	No	No changes on the project are required due to such comment.
C31: No suggestions	No	No changes on the project are required due to such comment.
C32: No suggestions	No	No changes on the project are required due to such comment.

C33: No suggestions	No	No changes on the project are required due to such comment.

The sustainable development assessment is not going to be revised since the majority of comments from stakeholders were positive. No negative comments were received and during the summarized blind exercise no indicators were scored negatively.

Stakeholders were of the opinion that the project generates benefits on biodiversity and ecosystem conservation, as it prevents deforestation to obtain fuel wood. However, Project Participants will not consider a positive impact on the biodiversity indicator since the actual conservation of ecosystems depends on several factors not controlled by the project.

Stakeholders suggested improvements in the monitoring of origin of renewable biomass used in the project activity. Given the exposed, project proponents will incorporate procedures in order to monitor the origin of biomass used as a fuel. Hence, the indicator related to the origin of renewable biomass will be revised in the Sustainability Monitoring Plan.

E.2. Stakeholder Feedback Round

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

The Stakeholder Feedback Round was developed following Gold Standard recommendations for the Local Stakeholder Consultation Process. This means a physical meeting was held as part of the Stakeholder Feedback Round.

Letters and e-mails were sent on 21/06/2013 to relevant stakeholders (the same stakeholders invited for the physical meetings) describing how the consultations process was developed.

A summary of the stakeholder comments received and how they were assessed was also described on such letters. In this same letter, stakeholders were informed on how to make additional comments on the project and on how to obtain the current version of the project PDD and Passport. These documents were made available on Sustainable Carbon website (http://www.sustainablecarbon.com/Conhecimento/).

E. 3. Discussion on continuous input / grievance mechanism

Discuss the Continuous input / grievance mechanism expression method and details, as discussed with local stakeholders.

Sustainable Carbon has explained the concepts of continuous input/grievance mechanism to stakeholders during the consultation meeting. Such explanation was followed by detailing the suggested methods proposed for the project (process book, telephone access and internet/email access).

Stakeholders made few comments and did not require the use of a Nominated Independent Mediator. Hence, this additional method will not be used. Furthermore, in order to attend the stakeholders'

comments, Sustainable Carbon and Buenos Aires ceramic intend to perform two others physical meeting during the project crediting period in the region. The first meeting will be schedule after the first commercialization of carbon credits under the Gold Standard. The objective of these meetings is to provide more information about the project activity cycle.

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	**Justification**
Continuous Input / Grievance Expression Process Book	The Expression process book was adopted a few days after the consultation meetings. It is located in the Reception desk of Buenos Aires Ceramic.	The reception desk was chosen as the most appropriate place, since any person entering the ceramic company should first go to the reception. Placing the book outside the ceramic company was not considered feasible, since the ceramic factory is in an unpopulated area distant from the urban area.
Telephone access	Sustainable Carbon telephone was defined as the telephone access. Contact numbers were provided during the consultation meeting and in the invitations.	Sustainable Carbon is the party responsible for the communication with stakeholders.
Internet/email access	Sustainable Carbon e-mails and website were defined as the point of contact. Contact details were provided during the consultation meeting and in the invitations.	Sustainable Carbon is the party responsible for the communication with stakeholders.
Nominated Independent Mediator (optional)	This method is not to be used.	Sustainable Carbon and *Buenos Aires* Ceramic consider it is not feasible to opt for the nominated independent mediator. Stakeholders consider this choice is also not required.

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

SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
HUMAM RIGHTS			
1. The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human right abuses	Not relevant. The project is not expected to result in Human right abuses. Brazil ratified several treaties and conventions on human rights, including the American Convention on Human Rights (also known as the Pact of San José)[7].	Low.	None
2. The project does not involve and is not complicit in involuntary resettlement	Not relevant. The project does not involve any kind of resettlement or relocation.	Low.	None
3. The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.	Not relevant. The project has no impact on cultural heritage.	Low.	None
LABOR STANDARDS			
4. The project respects the employees' freedom of association and their right to collective bargaining and is	Not relevant. The project will not affect the employees' freedom of Association. The Brazillian Government has ratified 5 conventions of the International Labor Organization on Freedom of	Low.	None

[7] More information on: <http://www.oas.org/dil/treaties_B-32_American_Convention_on_Human_Rights_sign.htm>.

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
not complicit in restrictions of these freedoms and rights.	Association, Collective Bargaining, and Industrial Relations [8]. These include Conventions C098 (*Right to Organize and Collective Bargaining Convention*), C135 (*Workers' Representatives Convention*), C141 (*Rural Workers' Organizations Convention*), C151 (*Labor Relations (Public Service) Convention*) and C154 (*Collective Bargaining Convention*). Such conventions aim to provide workers' with important rights and benefits, such as protection against acts of anti-union discrimination in respect of their employment, effective protection against any act prejudicial to workers based on their status or activities as a workers' representative or on union membership or participation in union activities, ensure rural workers and public employees the principles of freedom of association, amongst others. These principles are respected by the project proponents.		
5. The project does not involve and is not complicit in any form of forced or compulsory labor	Not relevant. The project will not involve any form of forced or compulsory labor. Brazil has ratified ILO Conventions C29 (*Forced Labor Convention*) and C105 (*Abolition of Forced Labor Convention*)[9]. These conventions determine that each Member which ratifies it undertakes to take effective measures to secure the immediate and	Low.	None

[8] More information on: <http://www.ilo.org/ilolex/cgi-lex/ratifgroupe.pl?class=g03_01&country=Brazil>.
[9] More information on: <http://www.ilo.org/ilolex/cgi-lex/ratifgroupe.pl?class=g03_02&country=Brazil>.

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
	complete abolition of forced or compulsory labor: (a) as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system; (b) as a method of mobilizing and using labor for purposes of economic development; (c) as a means of labor discipline; (d) as a punishment for having participated in strikes; (e) as a means of racial, social, national or religious discrimination.		
6. The project does not employ and is not complicit in any form of child labor.	Not relevant. The project will not involve any form of child labor. Brazil has ratified ILO Conventions C138 (*Minimun Age Convention*) and C182 (*Worst Forms of Child Labor Convention*)[10]. Convention C138 determines that each Member for which this Convention is in force undertakes to pursue a national policy designed to ensure the effective abolition of child labor and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons. Convention C182 determines that Each Member which ratifies this Convention shall take immediate and effective measures to secure the prohibition and elimination of the worst	Low.	None

[10] More information on: <http://www.ilo.org/ilolex/cgi-lex/ratifgroupe.pl?class=g03_04&country=Brazil>.

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
	forms of child labor as a matter of urgency. Worst forms of child labor include: all forms of slavery or practices similar to slavery, the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances, the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs, work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children. No child labor is involved in any phase of this project activity, nor in the collection of biomass used by the project proponents.		
7. The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis	Not relevant. The project will not result in any form of discrimination. Brazil has ratified international conventions on discrimination, such as the ILO C100 Convention (*Equal Remuneration Convention*) and ILO C111 (*Discrimination (Employment and Occupation) Convention*) [11]. Convention C100 determines that each Member shall, promote, ensure the application to all workers of the principle of equal remuneration for men and women workers for work of equal value. Convention C111 determines that each Member for which this Convention is in force undertakes to declare and pursue a national policy designed to promote, equality of	Low.	None

[11] More information at: <http://www.ilo.org/ilolex/cgi-lex/ratifgroupe.pl?class=g03_03&country=Brazil >.

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
	opportunity and treatment in respect of employment and occupation, with a view to eliminating any discrimination in respect thereof.		
8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environment	Relevant. Employees in the ceramic sector are exposed to several occupational hazards that may compromise their health and safety. Thus, it is necessary to prioritize measures that eliminate or reduce the workers' exposure to these risks. Consequently, the use of PPE will be monitored by the project activity. The Company also applies the Environmental Risks Prevention Program (PPRA), a program established by the Norma Regulamentadora - NR-9 of the Secretariat of Labor Health and Safety of the Minister of Labor. It works in accordance with the Medical Control in Occupational Health Program – PCMSO, the NR-7, to promote Occupational Health. In case of a serious injury, the ceramic factory provides a personal transportation to the nearest hospital. In case of minor injuries Buenos Aires ceramic has a first aid material to attend the employees. Buenos Aires ceramic hired a consulting Engineer of Health and Safety at Work to make an assessment of the potential risks and which points can be improved within the company. Measures are being implemented at the moment. In addition, employees, who are allocated in	Medium.	Health and safety regulations are complied with. The project is expected to have a positive effect on the working conditions. As a mitigation measure, the project will monitor Health and Safety Practices in the ceramic factory, as described in the Sustainability Monitoring Plan (Section G of this document).

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
	charges are considered of higher insalubrities and earn additional income on their payment according to Brazilian Law[12].		
ENVIRONMENTAL PROTECTION			
9. The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle	*Buenos Aires* Ceramic factory will employ renewable biomass from different providers. Therefore, the project does not include any planting, agricultural or similar activities; neither involves large mono-culture plantations. Sustainable Carbon has significant experience with the project measures. It has helped over 50 ceramic factories in Brazil to apply renewable biomass as fuel. Hence, the company has a lot of experience with technology/measures applied by the project.	Low.	None
10. The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their big conservation value, or (d) recognized as protected by	The project will predominantly use native wood from sustainable management plans and *Algaroba* wood as fuels. The damages for the environmentally protected areas are not expected, once the conditions for the sustainable forest management program are fully implemented. Also, *Algaroba* wood is considered a non-native exotic species. The project will also monitor the origin of biomass used to assure a sustainable consumption of renewable fuels that does not	Medium.	Monitoring the origin of biomass, as described in the Sustainability Monitoring Plan (Section G of this document).

[12] Information regarding additional payment due to insalubrious working conditions are available at: <https://www.ufmg.br/prorh/dap/legislacao-de-pessoal/adicional-de-insalubridade/>.

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
traditional local communities.	result in environmental degradation.		
ANTI-CORRUPTION			
11. The project does not involve and is not complicit to corruption	Not relevant. The project does not involve corruption. Brazil has ratified the United Nations Convention against Corruption[13].	Low.	None
Additional relevant critical issues for my project type	**Description of relevance to my project**	**Assessment of relevance to my project (low/medium/high)**	**Mitigation measure**
None	None	None	None

[13] More information at: <http://www.unodc.org/unodc/en/treaties/CAC/signatories.html>.

F.2. Sustainable Development matrix

Insert table as in section D3 from your Stakeholder Consultation report (Sustainable Development matrix).

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Air quality	Monitoring the procedures related to the control of atmospheric emissions following SOCIALCARBON® procedures	None	The project is not expected to generate negative impacts on air quality. The project activity aims to improve monitoring procedures related to atmospheric emissions. Impacts on air quality due to the transportation of biomass are also not expected, since similar means of transportation (mainly trucks) were used in the baseline for the transportation of non-renewable biomass. The project will improve the monitoring procedures on atmospheric emissions, by applying the following indicator from SOCIALCARBON Standard® [14] : SOCIALCARBON indicators for Ceramic Industry , versions 8.2[15]: **Emissions to the atmosphere** - Evaluates the control over the atmospheric emissions involving the gases emitted during the productive process, except the greenhouse gases. This indicator is used to guaranty that appropriated measures is taken regarding the atmospheric emissions in over 40 ceramic factories in Brazil, through a more practical method based on participatory interviews and meetings with stakeholders. The project situation is analyzed on a periodical basis and is	0

[14] The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/ >.

[15] Available at:< http://www.socialcarbon.org/wp-content/themes/socialcarbon/docs/Industries_Ceramic_Sector_v8.2_09_06_2011.pdf>. Last visit on 30/10/2013.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			scored from 1 to 6, where 1 represents a critical situation and 6 represents a sustainable scenario. For the Emissions to the atmosphere indicator, the following scenarios are defined: 1. There is not monitoring of the emissions. There are not actions to control and reduce the emission. 2. There is monitoring, but the entrepreneur can't guarantee that it is in conformity with the legislations, norms and applies requisites. There are not actions to control and reduce the emission. 3. There is not monitoring of the emissions. There are actions to control and reduce the emission with evident results, even though not measurable. 4. There is monitoring, but the entrepreneur can't guarantee that it is in conformity with the legislations, norms and applies requisites. There are actions to control and reduce the emission with evident results and/or measurable. 5. There is monitoring and the entrepreneur can guarantee that it is in conformity with the legislations, norms and applies requisites. There are actions to control and reduce the emission with evident results. 6. There is monitoring and the entrepreneur can guarantee that it is in conformity with the legislations, norms and applies requisites. There are actions to control and reduce	

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			the emission with measurable results. Therefore, the project proponent will rely in site visits and interviews to determine the level of control over the atmospheric emissions. The aim of the project is to assure environmental impacts are avoided and a sustainable use and disposal of ashes is obtained.	
Water quality and quantity	None	None	The fuel switching project is not expected to result in impacts in water quality and quantity. Although water is used in the brick production process during the molding phase, the project only involves modifications in the burning phase, where impacts on water are unlikely to occur. The use of water shall remain similar to the baseline situation, where major impacts on water quality and quantity are not observed.	0
Soil condition	Monitoring the procedures related to the control and disposal of ashes following SOCIALCARBON® procedures	Low relevance	The project might result in environmental pollution in case appropriate procedures to manage and dispose ashes are not followed. During the project operation, ashes result from the burning of biomass. In the baseline situation, *Buenos Aires* ceramic discarded the ashes without a proper procedure and the potential for environmental impacts exists. With the project activity, new kinds of fuels will be used (renewable biomasses such as biomass residues) and the generation of ashes might increase. Therefore, the project proponent will monitor the procedures to control and dispose ashes on *Buenos Aires* ceramic. The project will apply the following indicator from	0

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			SOCIALCARBON Standard®[16]: SOCIALCARBON indicators for Ceramic Industry, version 8.2[17]: **Ashes** - Evaluates the procedures adopted by the entrepreneur in order to control the ashes and its destination. This indicator is used to guaranty that appropriated measures is taken to regarding the displacement of ashes in over 40 ceramic industries in Brazil, through a more practical method based on participatory interviews and meetings with stakeholders. The project situation is analyzed on a periodical basis and is scored from 1 to 6, where 1 represents a critical situation and 6 represents a sustainable scenario. For the Ashes indicator, the following scenarios are defined: 1. Ashes deriving from the biomass burning in the kilns are discarded without any environmental control. 2. Part of the ashes is designed in an inadequate way and the other part is reused/donates without specific control. 3. Ashes are totally reused or donated, but without specific control. 4. Ashes are totally reused or donated, with control of the quantity and destination of the material.	

[16] The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/ >.
[17] Available at: <http://www.socialcarbon.org/wp-content/themes/socialcarbon/docs/Industries_Ceramic_Sector_v8.2_09_06_2011.pdf>. Last visit on 16/04/2013.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			5. In addition to the last item, part of them is commercialized. 6. The company presented management system that includes procedures to store, to monitor, to reduce the generation, and others. Therefore, the project proponent will rely in site visits and interviews to determine the level of control over the handling and disposal of ashes. In addition, the ceramic manager will regularly monitor the production and destination of ashes. More information is described in Section G of this document. The aim of the project is to assure environmental impacts are avoided and a sustainable use and disposal of ashes is obtained.	
Other pollutants	None	None	The fuel switching project is not expected to result in increase or decrease of other pollutants. Brazilian legislation does not establish emission standards to ceramic industries, which indicates that these impacts are not expected to occur. Impacts on other pollutants due to the transportation of biomass are not expected, since similar means of transportation (mainly trucks) were used in the baseline for the transportation of non-renewable biomass.	0
Biodiversity	None	None	The fuel switching project is not expected to result in negative impacts on biodiversity, since it will likely result in the reduction of deforestation of the *Caatinga* biome by providing alternative fuels. However, the actual effects on biodiversity and on the conservation of the *Caatinga* biome depend on several factors outside the project boundaries.	0

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			Furthermore, the project will use, preferably, locally abundant biomass residues as fuel. Hence, as a conservative measure, a neutral impact on biodiversity is considered. The project is not expected to result in land use change nor in pressure on ecosystems or existing biomass chains.	
Quality of employment	Ceramic owner shall use, on a weekly basis, spreadsheets to control the use of safety equipments by employees.	Low relevant	The project is likely to result in positive impacts in the quality of employment. In the baseline situation, employees were resistant to use safety equipments, since they feel these equipments are uncomfortable to use due to high local temperatures. Also, no specific monitoring on the use of safety equipments existed. The project will improve the monitoring procedures on quality of emplyoment, by applying the following indicator from SOCIALCARBON Standard®[18]: SOCIALCARBON Brazilian red ceramic factories indicators, versions 1.1[19]: **Health and Safety Practices**: Evaluates the existing health and safety practices in the factories, including the distribution and supervised use of PPE (Personal Protective Equipment) by all employees as well as health and safety programs. The project situation is analyzed on a periodical basis and is scored from 1 to 6, where 1 represents a critical situation and 6 represents a sustainable scenario. The following scenarios are proposed:	+

[18] The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/ >.
[19] Available at:< http://www.socialcarbon.org/wp-content/uploads/2012/11/Red-Ceramic-Indicators_v02_05_09_2013.pdf >. Last visit on 30/10/2013.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			1. There is no control of PPE distribution. None of the health and safety programs required by law are being implemented. 2. PPE distribution is being controlled OR there is at least one health and safety program required by law being implemented. 3. The factory meets all legal requirements. 4. The factory meets all legal requirements and: (a) penalizes employees who do not properly use the PPE and/or (b) has signs encouraging the use of PPE in the factory and/or (c) The factory promotes lectures and events addressing issues related to health and safety in the workplace. 5. In addition to scenario 4, the factory contracts or has a technical professional or safety engineer on staff to ensure best practices in the company. 6. In addition to scenario 5, the factory develops complementary programs such as PPR, PPRPS and PCA; and/or the factory encourages physical activity or conducts activities for disease prevention. More information is available on Section G.	
Livelihood of the poor	None	None	The project is not expected to affect the living conditions of the poor.	0
Access to affordable and	None	Relevant to Goal seven: Ensure	The project is expected to positively impact the access to affordable and clean energy services. The measures applied	+

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
clean energy services		Environmental Sustainability. The project will produce energy from renewable sources. Brazilian Millennium Development Goals include measures to reduce GHG emissions and to promote alternative energy sources and the rational use of energy20.	by the project activity will result in renewable energy generation by utilizing renewable biomasses, thus providing alternative and clean energy sources that were not utilized in the baseline scenario. To monitor the project impact on this indicator, the following parameters will be used: 1. Total energy produced from renewable sources: the amount of renewable biomass used by Buenos Aires ceramic will be monitored during the crediting period (through purchase invoice, delivery notes or other documents concerning the acquisition of biomass). By using default values of energy content, the project proponents will be able to determine the amount of renewable energy produced during each year of the crediting period. Hence, this parameter relies in the monitoring of the amount of renewable biomass (in tonnes or m^3), while monitoring the amount of renewable energy in Terajoules. The project aims to increase the level of energy from renewable sources. A positive impact will be achieved in case these parameters are better than the baseline situation.	
Human and institutional capacity	None	None	The project is not expected to affect human and institutional capacity. The project includes the introduction of new technologies and processes that demanded additional training from some of the Buenos Aires ceramic's	0

[20] Information on Brazilians MDG are available at: <http://web.archive.org/web/20120505045715/http://www.pnud.org.br/odm/index.php?lay=odmi&id=odmi>. Last visited on 17/04/2013.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			employees. However, as this is not considered to be very significant in scale, a neutral impact is conservatively considered.	
Quantitative employment and income generation	None	Low relevance.	Quantitative employment and income generation is positively affected by the project. The ownership of the carbon credits is considered an important income for the ceramic owner, as these resources allowed to invest in the fuel switching measures applied by the project. In the baseline scenario, the ceramic factory had no incentive to reduce their GHG emissions and consequently did not invest in reducing their emissions. To monitor the project impact on this indicator, the amount of Voluntary Emission Reductions (or similar assets from the carbon market) issued will be monitored. A positive impact is assured in case the project is able to generate and issue carbon credits. Project proponents will also monitor the additional revenues made available by the project to biomass suppliers. Biomass suppliers are mostly individuals and companies located in the project region. In the baseline, revenues were being destined to individuals who explored the *Caatinga* biome to obtain firewood, which cause deforestation. During the project, revenues will be directed to renewable biomass suppliers. A positive impact is assured in case the project provides additional revenues to biomass suppliers. More information	+

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
			is described in Section G of this document.	
Access to investment	None	None	This indicator will not be affected by the project.	0
Technology transfer and technological self-reliance	None	None	The project is not expected to significantly affect technology transfer and technological self-reliance. The project includes the utilization of renewable biomasses in a sector where this is not a common practice. However, the project proponents consider the use of renewable biomass has a more significant impact on the "Access to affordable and clean energy services" indicator" and conservatively consider a neutral impact on the present indicator.	0

Justification choices, data source and provision of references

Air quality	Air quality is considered to be an important indicator to this project. The project measures directly affect emissions of GHG and may positively affect emissions of other atmospheric pollutants. The importance of air quality and the control of atmospheric pollution to ceramic industries can be evidenced by the following publications: <http://www.sebrae.com.br/setor/ceramica-vermelha/integra_bia?ident_unico=7390> <http://www.bancodonordeste.com.br/content/aplicacao/etene/etene/docs/ano4_n21_informe_setorial_ceramica_vermelha.pdf>. Information on Page 18. Detailed analysis of atmospheric pollution of ceramic industries is found on the following study: http://www.ucbcba.edu.bo/Publicaciones/revistas/actanova/documentos/v3n2/v3.n2.gallegos.pdf. All references were accessed and proved to be available on 16/04/2013. Margins of error are not applicable to this parameter, since no quantification on the chosen indicator (Emissions to the atmosphere) was made. This indicator will be assessed in a predominantly qualitative manner during the crediting period.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Water quality and quantity	Not applicable. The fuel switching project is not expected to generate any impact or risk for water resources.			
Soil condition	The project will apply the following indicator from SOCIALCARBON Standard®[21]: SOCIALCARBON indicators for Ceramic Industry[22]: Ashes. This indicator is used to guaranty that appropriated measures is taken on the control and displacement of ashes in over 40 ceramic industries in Brazil, through a more practical method based on participatory interviews and meetings with stakeholders. The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/>. The indicators for ceramics are available at: <http://www.socialcarbon.org/wp-content/themes/socialcarbon/docs/Industries_Ceramic_Sector_v8.2_09_06_2011.pdf>. The environmental impact of ashes production in Brazilian ceramic industries is mentioned on the following study: <http://www.bancodonordeste.com.br/content/aplicacao/etene/etene/docs/ano4_n21_informe_setorial_ceramica_vermelha.pdf>. Information available on Page 18. Margins of error are not applicable to this parameter, since no quantification on the chosen indicator (Ashes) was made. This indicator will be assessed in a predominantly qualitative manner during the crediting period.			
Other pollutants	Not applicable. The project is not expected to generate any impact related to other pollutants. Brazilian legislation does not establish emission standards for other parameters to ceramic industries, which indicates that these impacts are not expected to occur.			
Biodiversity	Not applicable. The project is not expected to generate any impact or risk for biodiversity, since utilizes biomass residues. The origin of the biomasses shall be monitored during the crediting period to ensure only renewable biomasses are used, thus mitigating possible impacts to biodiversity.			
Quality of employment	The project will apply the following parameter: Health and Safety practices. The project is likely to result in positive			

[21] The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/>. Last visit on 12/06/2013.
[22] Available at: <http://www.socialcarbon.org/wp-content/themes/socialcarbon/docs/Industries_Ceramic_Sector_v8.2_09_06_2011.pdf>. Last visit on 12/06/2013.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
	impacts in the quality of employment.			
Livelihood of the poor	None. The project is not expected to affect the living conditions of the poor.			
Access to affordable and clean energy services	The common practice in Brazilian red ceramic industries is the use of native firewood (non-renewable woody biomass) as fuels. Information on fuels commonly used by the ceramic sector in Brazil are available at: <https://ben.epe.gov.br/BENSeriesCompletas.aspx>. The contribution of the project to this indicator includes the generation of energy from renewable sources. More information on the expected levels of renewable energy generation are found in the Project Design Document. Margins of error are not yet determined for this parameter, since no quantification on the chosen indicator (Total energy produced from renewable sources) was made at this point. This parameter is based on the monitoring of purchase invoices, delivery notes or other documents concerning the acquisition of biomass and by applying default values of energy content for the type of renewable biomass used as fuels. Margins of error are likely to be small (<10%) since the monitoring will be based on information used for commercial purposes measured by third parties (measurements of the amount of biomass purchased, which is used to determine due financial compensations) and on default values published on peer reviewed articles.			
Human and institutional capacity	Not applicable. The project is not expected to affect human and institutional capacity.			
Quantitative employment and income generation	The project will positively affect income generation, since the ownership of the carbon credits is considered an important income for the ceramic owner, as these resources allowed them to invest in the fuel switching measures applied by the project. More information on the project´s expected generation of emission reductions is available in the Project Design Document. Legal arrangements between the project participant indicate that the ceramic ownerwill have ownership of a portion of the carbon credits generated by the project. Documents on such legal arrangement are available for the Designated Operational Entity responsible for the validation of the project. Margins of error are not yet determined for this parameter, since no quantification on the chosen indicator (Voluntary Emission Reductions issued) was made at this point. Margins of error are likely to be very small (<5%) since the monitoring will be based on the amount of VERs			
Access to investment	Not applicable. This indicator will not be affected by the project.			

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Technology transfer and technological self-reliance	Not applicable. The project is not expected to significantly affect technology transfer and technological self-reliance.			

SECTION G. Sustainability Monitoring Plan

No	01
Indicator	**Air quality**
Mitigation measure	None.
Chosen parameter	**Emissions to the atmosphere**
Current situation of parameter	The project developers are preparing procedures to control and monitor atmospheric emissions.
Estimation of baseline situation of parameter	In the baseline situation, the ceramic factory lack specific procedures to control and monitor atmospheric emissions. A quantification of these emissions in the baseline is not possible, since information is not available.
Future target for parameter	Increased control over atmospheric emissions, including regular monitoring. The ceramic owner will monitor atmospheric emissions with the use of Ringelmann smoke charts and atmospheric reports as recommended by the environmental authority of *Pernambuco*. The project will apply the following indicator from SOCIALCARBON Standard®[23]: SOCIALCARBON indicators for Ceramic Industry[24]: Emissions to the atmosphere. The target is to obtain a higher score

[23] The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/>.

		than the estimated for the baseline situation. The scoring system of the SOCIALCARBON Standard is described in Section F.2.
Way of monitoring	How	Evaluations through annual reports as recommended by CPRH (Environment Agency of *Pernambuco* State), the environmental authority. Results shall be stored to assess the intensity of atmospheric emissions.
	When	On a bi-weekly basis for the Ringelman smoke charts. On an annual basis for atmospheric reports.
	By who	Ceramic factory employees.

No	02
Indicator	**Soil condition**
Mitigation measure	Monitoring the procedures related to the control and disposal of ashes
Chosen parameter	**Procedures related to the control and disposal of ashes.**
Current situation of parameter	*Buenos Aires* ceramic minimize the environmental impacts of the ashes. Major incidents or impacts were not observed due to the disposal of ashes.
Estimation of baseline situation of parameter	In the baseline situation, *Buenos Aires* ceramic discarded the ashes without a proper procedure and the potential for environmental impacts exists.
Future target for parameter	The aim of the project is to assure environmental impacts are avoided and a sustainable use and disposal of ashes is obtained. The project will apply the following indicator from SOCIALCARBON Standard®[25]: SOCIALCARBON indicators for Ceramic Industry[26]: Ashes. The target is to obtain a higher

[24] Available at: <http://www.socialcarbon.org/wp-content/themes/socialcarbon/docs/Industries_Ceramic_Sector_v8.2_09_06_2011.pdf>. Last visit on 16/04/2013.
[25] The SOCIALCARBON Standard is a certification adept at bringing demonstrable social, environmental and economic benefits to the stakeholders of carbon offset projects. More information at: <http://www.socialcarbon.org/>.

		score than the estimated for the baseline situation. The scoring system of the SOCIALCARBON Standard is described in Section F.2.
Way of monitoring	How	Ashes shall be quantified by using standard storage bags with a known weight. Employees on the ceramic shall use spreadsheets to control the amount of storage bags leaving the ceramic each time ashes were collected for final destination. Such spreadsheet shall also include information on the destination of ashes, such as the person/entity responsible for collecting the ashes and the place of destination. Photographs shall be used evidencing its final destination. Interviews and meetings with stakeholders and ceramic personnel on *Buenos Aires* ceramic shall also be applied to identify the relevant score under the SOCIALCARBON indicator.
	When	Ashes shall be quantified and have their destination monitored whenever they were collected for its final destination. The assessment on the relevant score of the SOCIALCARBON indicator will be performed once every monitoring period.
	By who	Project participants. Ceramic owner shall assign personnel to quantify and monitor the final destination of ashes. Sustainable Carbon will help the ceramic owner identify the corresponding scoring of the Project scenario, following the requirements of SOCIALCARBON Standard.

No	03
Indicator	**Quality of employment**
Mitigation measure	Monitoring Health and safety practices on the ceramic factory, including the use of safety equipments by employees working with biomass and around the kilns.

[26] Available at: <http://www.socialcarbon.org/wp-content/themes/socialcarbon/docs/Industries_Ceramic_Sector_v8.2_09_06_2011.pdf>. Last visit on 16/04/2013.

Chosen parameter	**Health and Safety Practices**	
Current situation of parameter	The project developer will implement procedures to control and monitor the use of safety equipments.	
Estimation of baseline situation of parameter	In the baseline situation, employees were resistant to use safety equipments, since they felt these equipments were uncomfortable to use due to high local temperatures. Also, no specific monitoring on the use of safety equipments existed. The baseline situation also included the manual transportation and feeding of the kilns, which could expose workers to unsafe conditions and cause excessive smoke due to inefficient burning of woody biomass.	
Future target for parameter	The aim of the project is to obtain a higher score for this indicator than the estimated for the baseline situation. The scoring system of the SOCIALCARBON Standard is described in Section F.2.The project aims to reduce employee resistance and obtain higher usage rates of safety equipments by employees working with biomass and around the kilns.	
Way of monitoring	How	Ceramic manager shall use spreadsheets to control the use of safety equipments by employees. Employees shall provide their signatures on such spreadsheet each time they receive safety equipment. Site visits, reports on health and safety programs/actions and interviews with employees and managers of the ceramic will be used to assess further health and safety practices.
	When	Health and safety practices shall be evaluated on a yearly basis. The use of PPE will be registered on a monthly basis. Data will be consolidated for every monitoring period.
	By who	Project participant[27]

No	04

[27] Ceramic owner shall assign manager to monitor the use of safety equipments. Sustainable Carbon will assist the ceramic owner to assess Health and Safety practices and to identify their respective score (scenario) as defined by the SOCIALCARBON indicator.

Indicator		**Quantitative employment and income generation**
Mitigation measure		None.
Chosen parameter		**Voluntary Emission Reductions issued.**
Current situation of parameter		The project has already issued Voluntary Emission Reductions. Under the Verified Carbon Standard (VCS) the project has issued 67,017 tCO_2e from 01/01/2010 to 29/02/2012, corresponding to its first monitoring period. Applying to Gold Standard, the project crediting period starts on 01/03/2012, and ends on 31/12/2019. More detailed information on Gap Analysis Report.
Estimation of baseline situation of parameter		In the baseline scenario, *Buenos Aires* ceramic had no incentive to reduce their GHG emissions and consequently did not invest in reducing their emissions.
Future target for parameter		The project is expected to reduce 209,428 tCO_2e during the crediting period. However, the actual emission reductions will depend on the production and the related amount of renewable biomass used. Hence, a positive impact for this indicator is achieved in case the project is able to generate and issue carbon credits.
Way of monitoring	How	The issuance of Voluntary Emission Reductions (or similar assets from the carbon market) will be monitored.
	When	Annually
	By who	Project Participants. Staff from *Buenos Aires* ceramic shall store information regarding the project operation, including fuel usage and production output. Sustainable Carbon shall determine the emission reductions resulting from the project.

No	05
Indicator	**Quantitative employment and income generation**

Mitigation measure		None.
Chosen parameter		**Additional revenues for biomass suppliers**
Current situation of parameter		Currently, ceramic owner controls the payments to each of their biomass suppliers. Only renewable biomass is used.
Estimation of baseline situation of parameter		In the baseline, revenues were being destined to individuals who explored the *Caatinga* biome to obtain firewood, which cause deforestation. Revenues were rather low, since this type of fuel was inexpensive
Future target for parameter		The project is allowing *Buenos Aires* ceramic to use exclusively renewable biomass as fuel. Since these types of fuels are more expensive than native firewood, it is likely that total revenues to biomass suppliers will increase. Furthermore, these revenues are now being destined to suppliers of renewable biomass, which do not cause deforestation.
Way of monitoring	How	Total revenues will be monitored by storing purchase invoices, receipts of sale and other documents concerning biomass acquisition. Total revenues shall be compared to the projected baseline fuel cost for *Buenos Aires* ceramic which was destined to native firewood suppliers. This parameter is defined ex-ante using data from August, 2007 to July, 2008[28]. The cost of non-renewable wood will be updated applying a conservative annual correction factor of 6.5%[29,30].
	When	Annually
	By who	Project Participants. Staff from *Buenos Aires* ceramic shall store information on biomass acquisition and costs. Sustainable Carbon shall determine the additional revenues by comparing monitored values with figures estimated for the baseline situation.

[28] The same data was used for the assessment of additionality. Hence, this approach provides consistency. Furthermore, it is not feasible to monitor the cost of non-renewable biomass ex-post, since this biomass is no longer used by the project.

[29] A factor of 6.5% will be used to account for general price increase due to inflation. This value is considered conservative since it was the highest inflation rate evidenced in Brazil since 2004. Information available at: <http://agenciabrasil.ebc.com.br/noticia/2012-01-06/inflacao-oficial-registra-em-2011-maior-taxa-desde-2004>. Last visited on 23/04/2013.

[30] No methodology was found to correct the price of non-renewable biomass in Brazil, since this is mostly an informal market.

No		06
Indicator		**Biodiversity**
Mitigation measure		Monitoring the origin of biomass
Chosen parameter		**Origin of renewable biomass**
Current situation of parameter		Following the project measures, *Buenos Aires* ceramic have been utilizing renewable biomass as fuel. Currently, the ceramic company uses exclusively renewable biomass as fuel.
Estimation of baseline situation of parameter		In the baseline situation, Buenos Aires ceramic used exclusively native firewood as fuel. As described on the Gap Analysis Report (version 05), 90.93% of that fuel is considered non-renewable
Future target for parameter		The project aims to monitor the amount of native wood from sustainable management plan and *Algaroba* wood by the weighing receipts issued by the weighbridge system of *Buenos Aires* ceramic or by invoices and receipts from biomass providers.
Way of monitoring	How	The origin of the renewable biomass will be assessed storing documents (receipts, invoices) from the biomasses providers, thus allowing determining its origin. The biomasses shall be considered renewable as fulfilling definitions of renewable biomass approved by the CDM Executive Board[31]. Also, Sustainable Carbon and Buenos Aires Ceramic will work with biomass providers to allow tracking the origin of Algaroba firewood. Biomass providers and/or land owners shall be contacted to ensure a appropriate management of Algaroba forests, in accordance with national regulations.
	When	Annually
	By who	Project Participants. Staff from *Buenos Aires* ceramic shall store information regarding the biomass purchase and acquisition. Sustainable Carbon shall assess the source of biomass and confirm they comply with CDM EB definitions of renewable biomass.

[31] EB 23, Annex 18 – Definition of renewable biomass. Available at: <http://cdm.unfccc.int/EB/Meetings/023/eb23_repan18.pdf>.

No		07
Indicator		**Biodiversity**
Mitigation measure		Monitoring the origin of biomass.
Chosen parameter		**Biomass surplus**
Current situation of parameter		Following the project measures, *Buenos Aires* ceramic have begun utilizing renewable biomass as fuel. Currently, 100% of the energy used for the productive process of the ceramic company comes from renewable sources.
Estimation of baseline situation of parameter		In the baseline situation, *Buenos Aires* ceramic used a 100% of non-renewable woody biomass for thermal energy generation. Although it is not feasible to determine the amount of native firewood available, this type of fuel has been an important source of energy for the ceramic sector[32].
Future target for parameter		The project aims to monitor the amount of native wood from sustainable management plan and *Algaroba* wood by the weighing receipts issued by the weighbridge system of *Buenos Aires* ceramic. Besides, the amount of renewable biomass can also be monitored through purchase invoice, delivery notes or other documents concerning the acquisition of renewable biomasses.
Way of monitoring	How	Sustainable Carbon developed a detailed Study on the surplus of all types of biomass used by the project activity. This study conducted a biomass assessment survey of the existing users to estimate the biomass requirement/consumption in the project region. During the monitoring period, Sustainable Carbon shall annually determine if the quantity of available biomass in the region (as determined ex ante), is at least 25% larger than the quantity of biomass that is utilized including the project activity. More information is available in the Gap Analysis Report.

[32] Brazilian Energy Balance, Chapter 3. Available at: <https://ben.epe.gov.br/BENSeriesCompletas.aspx>.

	When	Annually
	By who	Project Participants. Staff from *Buenos Aires* ceramic shall store information regarding the project operation, including biomass usage. Sustainable Carbon shall assess the biomass surplus and determine the occurrence of leakage.

No		08
Indicator		Access to affordable and clean energy services
Mitigation measure		None.
Chosen parameter		Total energy produced from renewable sources
Current situation of parameter		Following the project measures, 100% of the energy used in the kilns comes from renewable sources.
Estimation of baseline situation of parameter		In the baseline situation, Buenos Aires ceramic used exclusively native firewood as fuel. As described on the Gap Analysis Report (version 05), 90.93% of that fuel was considered non-renewable. This means Buenos Aires ceramic used around 0.0011 TJ of renewable energy per thousand of ceramic pieces produced[33].
Future target for parameter		The aim of the project is to allow the complete substitution of non-renewable biomass with renewable biomasses. The target is to generate all the energy demand of the ceramics from renewable sources.
Way of monitoring	How	The amount of renewable biomass used by the ceramic factory will be monitored during the crediting period (through purchase invoice, delivery notes or other documents concerning the acquisition of biomass). By using default values of energy content, the project proponents will be able to determine the amount of renewable energy produced during each year of the crediting period.

[33] Calculations are available on version 4.0 of the VER Estimates spreadsheet.

	When	On a monthly basis. Data will be consolidated on an annual basis
	By who	Project Participants. Staff from each ceramic shall store information on biomass purchase and acquisition. Sustainable Carbon shall determine the amount of renewable energy generated during the crediting period.

Additional remarks monitoring

Following Gold Standard Requirements, all non-neutral indicators of the Sustainable Development Matrix are included in the monitoring plan as well as all indicators to which mitigation measures are determined.

As required by the additional specific eligibility criteria detailed in Annex C of GS Toolkit v2.2, the Sustainability Monitoring Plan also includes the monitoring of parameters related to the usage of renewable biomass. Monitoring parameters are included in order to assure all biomass used is from renewable origin and to allow the assessment of leakage from the use of such biomass. These parameters are described in the above tables.

SECTION H. Additionality and conservativeness

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

H.1. Additionality

Not applicable. The project has followed Gold Standard requirements of additionality. The project has applied the T*ool for the demonstration and assessment of additionality* (version 07.0)[34] to demonstrate additionality.

H.2. Conservativeness

Conservativeness is assured by applying approved methodologies and methodological tools. The project applies the following methodology that is eligible for application under the Gold Standard: "**AMS-I.E: Switch from Non-Renewable Biomass for Thermal Applications by the User**", version 05". The demonstration of additionality is done by applying the "*Tool for the demonstration and assessment of additionality*", version 07.0. The most recent version at the time of first submission is applied.

Conservativeness is also achieved by utilizing historical data from *Buenos Aires* project site for the ex-ante calculation of baseline and project emissions. Internal data is partially used to determine baseline emissions (such as the production of bricks in the baseline period), but are considered to be of a reliable nature since they are used to assess the productivity of *Buenos Aires* ceramic.

The consumption of non-renewable fuels during the baseline period was taken from receipts signed by fuel suppliers, a third party information which is used for commercial purposes (to determine financial compensations between the ceramic owner and the suppliers). Hence, this information is also considered to be reliable. During the project monitoring, the consumption of fuels (renewable biomasses) will also be taken from receipts or purchase invoices from third party fuel suppliers. This set of data was chosen based on the prerogative of conservativeness and is considered to be the most reliable data available to determine baseline emissions and emission reductions.

Data from the most recent year before the VCS project initiation was used (the last year the ceramic used non-renewable firewood). Data used to calculate baseline emissions were doubled checked by Sustainable Carbon in order to minimize the likelihood of data errors. The baseline scenario is identified considering published data on the red ceramic sector in the project region (Brazil). More information is available in the Gap Analysis Report.

Project proponents have also assessed similar projects listed in the **Gold Standard Registry** to check the similarity between the identified baselines. It was identified one project named *Ceará Renewable*

[34] Tool available on UNFCCC's website: <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>. Last visited on: 17/04/2013.

Energy Bundle Project, located in *Ceará* state. The baseline for this project is very similar to the baseline of *Buenos Aires* ceramic. Besides, it was found several voluntary carbon projects developed by Sustainable Carbon under the Verified Carbon Standard[35]. These projects have also similar baselines, i.e. the consumption of non-renewable biomass for thermal energy generation.

ANNEX 1 ODA declaration

There is no public funding involved in this project activity. The project does not receive Official Development Assistance. As per Section 1.2.5 of the Gold Standard v2.2 Toolkit, a written declaration of the project's Non-use of ODA will be uploaded to the Gold Standard registry.

[35] Information on such projects available at: <http://www.markit.com/en/products/registry/markit-environmental-registry-public-view-reports.page#registered_projects>. Access this site and type Sustainable Carbon in the search field. Last visit on 17/04/2013.