

**ASB0028**

## Standardized baseline

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# Fuel switch, technology switch and methane destruction in the charcoal sector of Senegal

Version 01.0



**United Nations**  
Framework Convention on  
Climate Change

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## **1. Introduction**

1. This standardized baseline provides the baseline emission factor and positive list for fuel switch, technology switch and methane destruction in the charcoal production sector of the Senegal.

## **2. Scope, applicability, and entry into force**

### **2.1. Scope and applicability**

2. The scope of this standardized baseline covers standardized values of parameters used for baseline emissions calculation and a positive list for fuel switch, technology switch and methane destruction in the charcoal sector.
3. This standardized baseline is developed using a combination of (a) the approach contained in the “Guidelines for the establishment of sector specific standardized baselines” and (b) a methodological approach contained in small-scale methodology AMS-III.BG “Emission reduction through sustainable charcoal production and consumption”. It applies to the following measures: fuel and feedstock switch, switch of technology with or without change of energy source, and methane destruction, and any combination of these measures.
4. This standardized baseline is applicable to CDM project activities implemented in the Senegal.
5. The CDM project activities can apply this standardized baseline under the following conditions:
  - (a) The standardized baseline can only be used in conjunction with the latest approved version of the small-scale methodology AMS-III.BG. “Emission reduction through sustainable charcoal production and consumption”;
  - (b) All the applicability conditions elaborated in the small-scale methodology AMS-III.BG. shall apply including that of the supply to identified consumers for thermal applications;

### **2.2. Entry into force and validity**

6. This standardized baseline enters into force upon adoption by the CDM Executive Board on 20 October 2016. This standardized baseline is valid from 20 October 2016 to 20 October 2019.

## **3. Normative references**

7. This standardized baseline is based on the proposed new standardized baseline PSB0034 “Efficient charcoal production in Senegal” submitted by the DNA of Senegal.
8. For more information regarding the proposed new standardized baseline as well as their consideration by the CDM Executive Board please refer to [http://cdm.unfccc.int/methodologies/standard\\_base/index.html](http://cdm.unfccc.int/methodologies/standard_base/index.html) >.

## 4. Definitions

9. The definitions contained in the latest version of the approved small scale methodology AMS-III.BG “Emission reduction through sustainable charcoal production and consumption” shall apply.
10. The definitions contained in the Glossary of CDM terms shall apply.

## 5. Parameters, values and positive list

11. The provisions in the methodology AMS-III.BG for determining the values of the parameters listed in Table 1 below do not apply. Instead, project participants shall use the standardized values provided in the Table 1 below<sup>1</sup>.

**Table 1 Standardized values**

Parameter	Unit	Description	Standardized Values	Source
$f_{NRB,BL,wood}$	Fraction	Fraction of biomass of type $i$ used in the absence of the project activity that can be established as non-renewable biomass	0.85	Default values of fraction of non-renewable biomass can be retrieved at: < <a href="http://cdm.unfccc.int/DNA/fNRB/index.html">http://cdm.unfccc.int/DNA/fNRB/index.html</a> > <sup>2</sup>
$M_d$	tonne of CH <sub>4</sub> /tonne of raw material	Factor to account for any legal requirement for capture and destruction of methane in the charcoal production facility	0	Official letter from the DNA of the Republic of Senegal
$SMG_{y,b}$	tonnes CH <sub>4</sub> /t charcoal	Specific methane generation for the baseline charcoal generation process in the year $y$ ;	0.030	Based on AMS-III.BG.
$CF$	-	Default wood to charcoal conversion factor	6	Based on AMS-III.BG.
$NCV_{wood}$	TJ/t	Default net calorific value of wood	0.015	Based on AMS-III.BG.
$EF_{projected\_fossilfuel}$	tCO <sub>2</sub> /TJ	Emission factor for the substitution of non-renewable woody biomass by similar consumers	81.6	Based on AMS-III.BG.

<sup>1</sup> The standardized baseline can be used together with future versions of methodology AMS-III.BG, as long as the requirements related to the parameters mentioned in table 1 do not change.

<sup>2</sup> This value is applicable until a new value is approved by the CDM Executive Board.

Parameter	Unit	Description	Standardized Values	Source
<b><i>NCV<sub>charcoal,default</sub></i></b>	TJ/t	Default net calorific value of charcoal from coconut husks, bamboo and other purely woody source of biomass	0.0295	Based on AMS-III.BG.
	TJ/t	Default net calorific value of charcoal from other sources such as mixed agricultural wastes	0.01947	Based on AMS-III.BG.

12. The provisions on the demonstration of additionality in the methodology AMS-III.BG do not apply if the project participants are able to demonstrate that the project activity corresponds to one of the positive list specified in Table 2 below.

**Table 2. Positive list**

Measure	Description
<b>Feedstock</b>	Renewable biomass, as specified in the small-scale methodology AMS-III.BG.
<b>Methane destruction</b>	Any type of capture and destruction of methane emitted during the pyrolysis process.
<b>Technology</b>	<p>Metal kilns and other improved kilns, including but not limited to:</p> <ul style="list-style-type: none"> <li>a) Casamance Kiln: Earth mound kiln equipped with a chimney. The chimney allows a better control of air flow. The hot flue gas is partly redirected into the kiln which enhances pyrolysis.</li> <li>b) Adam retort sedimentary kiln: It redirects the flue gases back to the carbonization chamber. It burns the volatiles and the tar components almost completely. The retort is suitable for semi-industrial production.</li> <li>c) Carbo twin retort: This kiln is a semi-continuous production module. It consists of two carbonization chambers. The pyrolysis vapours from one chamber are combusted to heat-up the other chamber.</li> <li>d) Pyro 7 retort sedimentary kiln with or without briquetting process: It uses two chambers: one for pre-combustion, one for the production of charcoal. It is usually made of metal. It also incorporates air flow control and a chimney.</li> </ul>

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### Document information

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01.0	20 October 2016	Initial publication. This standardized baseline is approved by CDM Executive Board in accordance with the "Procedure for development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).

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