



## Proposed standardized baseline submission form (Version 03.0)

*To be used by a designated national authority (DNA) when submitting a proposed standardized baseline in accordance with the "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).*

### INFORMATION TO BE COMPLETED BY THE DNA

<b>Title of the proposed standardized baseline:</b>	Standardized baseline for efficient charcoal production in Côte d'Ivoire
<b>Name(s) of the Party or Parties to which the proposed standardized baseline applies:</b>	Republic of Côte d'Ivoire
<b>DNA submitting this form:</b>	Ministère de l'Environnement et du Développement Durable, Agence Nationale de l'Environnement (ANDE)  Côte d'Ivoire
<b>Is the proposed standardized baseline submitted by a single Party or group of Parties?</b>  <i>(If the Party had 10 or fewer registered CDM project activities as of 31 December 2010, or each Party of the group of Parties had 10 or fewer registered CDM project activities as of 31 December 2010, has the Party or each Party of the group of Parties used the option to omit the assessment report more than twice in past submissions of a proposed standardized baseline?)</i>	<input checked="" type="checkbox"/> Single Party <input type="checkbox"/> Group of Parties  The Party has not used the option to omit the assessment report more than twice in past submissions of a proposed standardized baseline.

### Attachments:

- ☒ Additional documentation supporting the submission (e.g. relevant data, statistics, studies, calculation tables, quality control report, etc.), where applicable

### Reference documents non accessible on the internet

- APFNP, 2015. Rapport de la présentation officielle du bio-charbon "AFFERY MBOBY" et le fourneau amélioré "NDABO" EXEMPLE: BRADES, 2015. Brève présentation du projet d'industrialisation de l'unité de production de biocharbon.docx
- GIZ, 2013. Étude sur le marché domestique du bois, des produits bois et des métiers associés en Côte d'Ivoire
- GIZ, 2014. Étude sur l'organisation de la filière charbon de bois dans l'espace Tai en vue de l'amélioration des techniques de carbonisation et des conditions de travail aux différentes étapes de la production
- Republic of Côte d'Ivoire, 2014a. Procédures - Demande et renouvellement de permis d'exploitation de charbon de bois
- Republic of Côte d'Ivoire, 2015a. Attestation d'obtention de parcelles de reboisement
- Republic of Côte d'Ivoire, 2015b. Attestation de reboisement.

<ul style="list-style-type: none"> <li>• Republic of Côte d'Ivoire, 2015c. Permis charbon de bois – Exemple</li> <li>• Republic of Côte d'Ivoire, 2015d. Statistiques_Nombre de permis_Production annuelle_Charbon de bois_2000 – 2014</li> <li>• Republic of Côte d'Ivoire, 2015e. Absence de réglementation sur la capture de destruction de méthane lors de la carbonisation</li> <li>• Saphir, 2014. Énergie de cuisson en Côte d'Ivoire. Abidjan, Côte d'Ivoire</li> <li>• Sustainable Energy for All, 2012. Évolution Rapide et Analyse des Gaps de la Côte d'Ivoire</li> </ul>	
<input type="checkbox"/> Data used to establish the proposed standardized baseline in a sector-specific data template	
<input type="checkbox"/> An assessment report prepared by a designated operational entity (DOE)	
<input type="checkbox"/> Letters of approval of all the DNAs of the Parties to which the proposed standardized baseline applies, where the standardized baseline applies to a group of Parties	
<b>Name of authorized officer signing for the DNA:</b>	<b>Ms. Rachel BOTI-DOUAYOYA</b>
<b>Date (DD/MM/YYYY) and signature for the DNA:</b>	<b>01/02/2016</b>
<b>Contact information of the focal point(s) of the DNA:</b> <i>(Names, e-mail addresses and phone contacts for procedural and technical communication on the submission)</i>	<b>Rachel BOTI-DOUAYOYA</b> <a href="mailto:rbdouayoua@gmail.com">rbdouayoua@gmail.com</a> <b>Work: +225 22 41 17 04</b> <b>Mobile: +225 49 38 16 91</b>
<b>Name(s) of the proponent(s) of the proposed standardized baseline:</b>	<b>The Designated National Authority (DNA) of Côte d'Ivoire</b>
<b>Affiliation of the proponent(s):</b> <i>(The definition of "admitted observer organization" can be found at <a href="https://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf">https://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf</a>)</i>	<input checked="" type="checkbox"/> Party <input type="checkbox"/> Project Participant (PP) <input type="checkbox"/> International Industry Organization <input type="checkbox"/> Admitted Observer Organization
<b>Contact information of the focal point(s) of the proponent(s):</b> <i>(Names, e-mail addresses and phone contacts for procedural and technical communication on the submission. This section does not need to be completed if the DNA(s) is(are) the proponent(s) of the proposed standardized baseline.)</i>	<b>N/A</b>
<b>INFORMATION TO BE COMPLETED BY THE SECRETARIAT AND THE PROPONENT(S)</b>	
Further inputs requested from the proponent(s) on the proposed standardized baseline: <b><i>(List of additional information and/or modifications that are required to prepare a draft standardized baseline, if applicable.)</i></b>	
Response from the proponent(s): <b><i>(If there are changes in the proposed standardized baseline form as a result of changes carried out, submit the changes in the highlighted text).</i></b>	

**Proposed standardized baseline submission form  
CDM-PSB-FORM (Version 03.0)**

Title: Proposed standardized baseline for efficient charcoal production in Côte d'Ivoire

Submission date (dd/mm/yyyy): 01/02/2016

Version number: 01.0

**Approaches**

*Check below all the approaches used to develop the proposed standardized baseline and state the version and/or the reference (number, title, version) if applicable.*

- ☒ The approach contained in the "Guidelines for the establishment of sector specific standardized baselines" (Version: 02.0)
- ☒ A methodological approach contained in an approved, proposed new or revised baseline and monitoring methodology (reference: AMS-III.BG - Emission reduction through sustainable charcoal production and consumption, version 03.0)
- ☐ A methodological approach contained in an approved, proposed new or revised methodological tool (reference : \_\_\_\_\_)
- ☐ The approach contained in the "Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM" (version: \_\_\_\_\_)

**Combination of the approaches (if applicable)**

*Provide a justification for the necessity and the appropriateness of the combination if more than one approach was used for the development of the proposed standardized baseline.*

The approaches contained in the "Guidelines for the establishment of sector specific standardized baselines" and in the approved baseline and monitoring methodology "AMS-III.BG Emission reduction through sustainable charcoal production and consumption" are combined as follows:

- The 'Guidelines' approach is applied to standardize additionality and baseline scenario identification, since no charcoal sector methodology-specific additionality or baseline determination provisions apply.
- The 'Methodological' approach is applied to standardize baseline emissions determination, based on the various available choices between default value parameters embodied in methodology AMS-III.BG.

Therefore, it is deemed that the combination of both approaches is appropriate since they concern complementary components of the Proposed Standardized Baseline and respectively contribute to a rigorous and detailed standardization process of the efficient charcoal production baseline in Côte d'Ivoire.

<b>New or revised methodology or methodological tool (if applicable)</b>
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*This section is applicable to the following situations:*

- 1. If there is no approved methodology or methodological tool available that can be used for the development of the proposed standardized baseline, and if the proponent wishes develop a new methodological approach by submitting a new methodology or methodological tool or revise the approach contained in an approved methodology or methodological tool, and/or*
- 2. If there is no approved methodology available to be used together with the proposed standardized baseline for the estimation of emission reductions, and the proponents wishes to develop new methodology or revise the existing approved methodology.*

*Check below how the new or revised methodology or methodological tool is/was submitted for approval by the CDM Executive Board and for what purpose in accordance with the "Procedure: development, revision and clarification of baseline and monitoring methodologies and methodological tools". In this case, indicate below the title of the new or revised methodology or methodological tool if applicable:*

- New or revised methodology or methodological tool<sup>1</sup>:*

☐ New methodology (title : \_\_\_\_\_)

☐ Revised methodology (title: \_\_\_\_\_)

☐ New methodological tool (title: \_\_\_\_\_)

☐ Revised methodological tool (title: \_\_\_\_\_)

**N/A**

- Purpose:*

☐ For using the methodological approach in new/revised methodology/methodological tool for development of the proposed standardized baseline

☐ For using the new/revised methodology together with the proposed standardized baseline to estimate emission reductions

**N/A**

- Process:*

<sup>1</sup> The proposed new or revised methodology or methodological tool for the purpose of developing a proposed standardized baseline, or the proposed new or revised methodology or methodological tool that will be used together with the proposed standardized baseline, may be submitted to the secretariat at the same time with the proposed standardized baseline in accordance with the "Procedure: development, revision and clarification of baseline and monitoring methodologies and methodological tools".

- ☐ Methodology (ies)/methodological tool is/was proposed through the bottom-up process
- ☐ Request the secretariat to seek a mandate from the CDM Executive Board for its top-down development (if this option is selected, provide justification below)

(Justification

:\_\_\_\_\_)

**N/A**

<b>Elements to be standardized</b>
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*Check below all the elements to be standardized by the proposed standardized baseline:*

- ☒ Additionality
- ☒ Baseline/baseline land-use scenario
- ☒ Baseline emission/removal parameter
- ☐ Land eligibility (applicable only to afforestation and reforestation project activities)

## **SECTION A: PROPOSED STANDARDIZED BASELINE DEVELOPED USING THE APPROACH CONTAINED IN THE “GUIDELINES FOR THE ESTABLISHMENT OF SECTOR SPECIFIC STANDARDIZED BASELINES”**

*Complete this section only when the proposed standardized baseline is developed using the approach contained in the “Guidelines for the establishment of sector specific standardized baselines”.*

### **Applicability of the proposed standardized baseline**

*Provide the following information:*

- *The host country (ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of disaggregation by region(s) within a host country, document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc.).*

**Côte d'Ivoire**

- *Other factors for disaggregation (e.g. output capacity, age of facilities) relating to the applicability of the proposed standardized baseline, if applicable.*

**N/A**

- *The sector(s) to which the proposed standardized baselines is applied. Note that a sector refers to a segment of a national economy that delivers defined output(s) (e.g. clinker production, domestic/household energy supply). The sector is characterized by the output(s) O<sub>i</sub> it generates.*

**Household energy supply**

- *The output to which the proposed standardized baseline is applied, i.e. the goods or services with comparable quality, properties, and application areas (e.g. clinker, lighting, residential cooking).*

**Charcoal**

- The measure(s) to which the proposed standardized baseline is applicable is/are:
  - ☒ Fuel and feedstock switch
  - ☒ Switch of technology with or without change of energy source (including energy efficiency improvement)
  - ☒ Methane destruction
  - ☐ Methane formation avoidance

### **Additionality standardization**

*Explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to standardize the additionality criterion of project activities or programmes of activities that are deemed additional. Document all underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.*

## INTRODUCTION

### Charcoal production in Côte d'Ivoire

According to the UN Statistics Division Energy Statistics Database 2015, the charcoal production in Côte d'Ivoire, for the year 2012, was **1,319,000 tonnes** (Knoema, 2015a), and the final consumption was 1,300,000 tonnes (Knoema, 2015b).

In a 2014 report on Cooking energy in Côte d'Ivoire (Saphir, 2014, p. 50), it is stated that in 2012, the country produced **1,400,000 tonnes** of charcoal.

The UN initiative "Sustainable Energy for All" has published a report entitled "Rapid Assessment and Gap Analysis – Côte d'Ivoire" (Sustainable Energy for All, 2012, p. 14), in which an evolution of the charcoal production, consumption and exportation is shown, from 2004 to 2007.

	2004	2005	2006	2007
<b>Production (1000 t)</b>	968.27	1004.98	1041.06	1078.53
<b>Consumption (1000 t)</b>	964.82	1001.25	1037.02	1074.17
<b>Exportation (1000 t)</b>	3.44	3.73	4.03	4.36

**Table 1 – Evolution of charcoal production, consumption and exportation, 2004 to 2007 (Sustainable Energy for All, 2012)**

Applying the same evolution trend of the production aspect (i.e. an average increase of 0.036% / year), as shown in Table 1, the charcoal production for the year 2012 reaches **1,287,150 tonnes a year**.

The evolution trend of consumption is the same (i.e. 0.036% / year), consequently the charcoal consumption for the year 2012 is 1,281,950 tonnes a year.

Therefore, the gap between the production and consumption is essentially the exportations, and for the year 2012 they would reach 5,200 tonnes or 0.4%.

The project team has met numerous stakeholders of the charcoal production sector (i.e. government institutions, associations of producers and producers) in Côte d'Ivoire, and the exportation of charcoal was never mentioned.

The 0.4% of exportation of charcoal in 2012, found using the evolution trend observed from 2004 to 2007, only confirms that it is anecdotic.

The charcoal production data in Côte d'Ivoire, collected from three different and credible sources (as shown above), show comparable numbers for the year 2012.

Considering that these are the latest figures available, it is estimated that for the purpose of this project, the total amount of charcoal production in Côte d'Ivoire, for the year 2012, should be the average value of the figures available in the three sources mentioned above.

Source	Knoema (2015a)	Saphir (2014)	Sustainable Energy for All (2012)	Average
Charcoal production (tonnes)	1,319,00	1,400,000	1,287,150	1,335,383

**Table 2 – Total charcoal production in Côte d'Ivoire - Average of 3 sources for 2012.**

Therefore, the total volume of charcoal production in Côte d'Ivoire used in this report is **1,335,383 tonnes**.

### **Regulated charcoal production**

In Côte d'Ivoire, the official charcoal production is regulated by law, under the Decree No. 94-368 of 1 July 1994. This Decree regulates timber extraction, woodworking, wood fuel and charcoal.

The Exploitation and Forest Industries Directorate or "*Direction de l'Exploitation et des Industries Forestières*" of the Ministry of Water & Forests of Côte d'Ivoire, works under the Decree, and controls the wood-energy and charcoal sector, and attributes the operating permits for firewood and charcoal, on plots where logging is permitted.

Each year, the Exploitation and Forest Industries Directorate issues the procedures to obtain or renew an operating permit for firewood and charcoal, which are linked to the activities of a forest producer with a valid permit.

In 2015, the mandatory documents that are needed to obtain or renew a charcoal permit (Republic of Côte d'Ivoire, 2014a) are listed below:

1. Permit request, addressed to the Minister of Water and Forests, with the contact details of the applicant, and the location of the product exploitation;
2. Judicial record dating back less than three months;
3. Certificate of Ivorian nationality;
4. Certificate of registration in the trade register;
5. Taxpayer account number;
6. Precise indication of the location of the place of business (i.e. plots where logging is permitted).
7. Complete list of employees of the operator with valid residence permits;
8. List of the urban warehouses where the products will be sold.
9. Written and legalized commitment to adhere to forestry law, including ensuring the use of the wood residues from the forestry exploitation; preserving the environment and soil by limiting the number of kilns to two per site and not changing the kiln placement; and to reforest one hectare of land per permit;
10. Certificate issued by the local Forest Service for obtaining a site for the compensatory one hectare for reforestation (Republic of Côte d'Ivoire, 2015a)
11. Contract between the authorized Forest producer and the Charcoal producer;
12. Receipt attesting payment of 200,000 CFA to the relevant body (i.e. Régie des Avances et des Recettes des Eaux et Forêts) for approval as an operator of charcoal;
13. Receipt of payment of the annual fee of 50,000 CFA for individuals and 100,000 CFA for groups.
14. The original of a previous licence (if applicable);
15. The status of the plot to be logged;



16. Certificate of reforestation issued by the head of the municipality (Republic of Côte d'Ivoire, 2015b).

If all the requirements are met, the applicant will receive an operating permit for charcoal, for the year 2015 (Republic of Côte d'Ivoire, 2015c), on an identified plot.

A GIZ study on the domestic wood market, wood products, and associated jobs in Côte d'Ivoire was carried out in 2013 (GIZ, 2013).

The study shows the statistics for the year 2011 and 2012, for all the secondary products of the forest (i.e. number of permits and corresponding production), including charcoal, and cites the source: "Exploitation and Forest Industries Directorate of the Ministry of Water & Forests of Côte d'Ivoire".

For the year 2012, the regulated charcoal production in Côte d'Ivoire is 70,532.52 tonnes (GIZ, 2013, p.40).

Incidentally, the Exploitation and Forest Industries Directorate of the Ministry of Water & Forests of Côte d'Ivoire has issued an official document (Republic of Côte d'Ivoire, 2015d), dated 6 July 2015, that provides the latest information on the status of the charcoal sector in the country, including statistics on the number of permits and the corresponding production, for the years 2000 to 2014.

Year	2009	2010	2011	2012	2013	2014
Number of permits	256	250	190	241	203	213
Charcoal production (t)	77,920	75,620	40,159	70,533	50,194	62,352

**Table 3 – Annual charcoal production statistics in Côte d'Ivoire – Excerpt for the years 2009 to 2014 (Republic of Côte d'Ivoire, 2015d)**

In order to compare data with the latest figures of the total volume of charcoal production in Côte d'Ivoire, which are related to the year 2012 (See Table 2), the statistics on the regulated charcoal production will also be those of the year 2012.

Therefore, the regulated charcoal production in Côte d'Ivoire, in 2012, amounts to a total of **70,533 tonnes**.

### Charcoal produced using alternative feedstocks (i.e. mixed agricultural wastes)

As mentioned above, the Exploitation and Forest Industries Directorate of the Ministry of Water & Forests of Côte d'Ivoire has issued an official document (Republic of Côte d'Ivoire, 2015d), dated 6 July 2015.

In section 1 entitled “*Au titre de la production du charbon de bois*” [With regards to charcoal production], the document states that in Côte d'Ivoire, charcoal production is done from all wood products that do not belong to the categories of lumber (crowns of felled wood, abandoned logs having lost their technological qualities etc.). We notice a low production of charcoal using coconut husks.

Coconut husks is considered to be part of woody biomass rather than alternative feedstock (UNFCCC, 2006), and the Exploitation and Forest Industries Directorate is not aware of charcoal produced using any kind of mixed agricultural wastes in Côte d'Ivoire.

In August 2015, a workshop was held in Afféry, a city in Eastern Côte d'Ivoire to introduce an « innovative » technology consisting of charcoal produced using biodegradable waste (i.e. coffee, rice, corn, cocoa) named “AFFERY MBOBY”, and new energy-efficient cookstoves named “NDABO”.

The report of the workshop (APFNP, 2015), states that this project aimed at proposing alternative solutions to the domestic energy crisis affecting households, and to provide support to the insufficient energy supply, highlight the use of biodegradable waste and to replace firewood and charcoal, by a renewable energy.

The project is funded by the Food and Agriculture Organization of the United Nations (FAO), and 100 kits of bio-charcoal and improved cookstoves were distributed to the attendees to test the technology and give feedbacks for improvement. A request for funding was made to the FAO to carry out a pilot project.

In Côte d'Ivoire, there is no known charcoal production done using other sources than woody biomass, and if such production exists, it is done at an insignificant level.

## MEASURE 1: FUEL AND FEEDSTOCK SWITCH

### Non-renewable vs renewable biomass

In this project and in this proposal, the term “renewable biomass” is used in accordance with the UNFCCC document entitled: “Definition of renewable biomass” (UNFCCC, 2006).

According to the UNFCCC document, biomass is **renewable** if ONE of the following applies:

1. Biomass is originating from land areas that are forests

Where:

- Land area remains forest.
- Sustainable management practices are enforced to maintain carbon stock level.
- In compliance with forest regulations.

2. Biomass is woody biomass and originates from croplands and/or grasslands

Where:

- Land area remains cropland and/or grasslands or is reverted to forest.
- Sustainable management practices are enforced to maintain carbon stock level.
- In compliance with forest regulations.

3. Biomass is non-woody biomass and originates from croplands and/or grasslands

Where:

- Land area remains cropland and/or grasslands or is reverted to forest.
- Sustainable management practices are enforced to maintain carbon stock level.
- In compliance with forest regulations.

4. Biomass is a biomass residue (i.e. biomass by-products, residues and waste streams from agriculture, forestry, and related industries)

Where:

- Its use in the project activity does not involve a decrease of carbon pools.

5. Biomass is the non-fossil fraction of an industrial or municipal waste (e.g. cardboard & paper waste and garden waste)

Biomass is **non-renewable** where none of the 5 conditions above applies.

### Regulated charcoal production

As mentioned above, the Exploitation and Forest Industries Directorate of the Ministry of Water & Forests of Côte d'Ivoire has issued an official document (Republic of Côte d'Ivoire, 2015d), dated 6 July 2015.

In section 2 entitled “Au titre des types de biomasse utilisés pour la production du charbon de bois” [With regards to the types of biomass (renewable or non-renewable) used in the charcoal production], the document states that, in accordance with the forestry regulations, a charcoal producer must reforest 1 hectare of land per permit, to compensate for charcoal production. Also, the forest producers must reforest, according to their quota of wood removal.

The obligation to reforest 1 hectare of plot to compensate the charcoal production, comes from item 9 of the list of mandatory documents needed to obtain or renew a charcoal permit (Republic of Côte d'Ivoire, 2014a), as shown above, which consists of a written and legalized commitment to reforest one hectare of land per permit.

The charcoal producer must also sign a contract with the authorized forest producer (Republic of Côte d'Ivoire, 2014a, Item 11), from whom the charcoal producer will only use the wood residues from the forestry exploitation, also mentioned in Item 9 above.

The forest producer who will carry out the forestry exploitation (i.e. timber extraction), must also reforest according to his quota of wood removal.

For these reasons, this biomass is renewable in theory, because it meets “Condition 1”, described in the document “Definition of renewable biomass” (UNFCCC, 2006), being woody biomass taken from land areas that are forests that will remain forests and that are “officially” under sustainable management practices.

A GIZ study on the organization of the charcoal industry in the Taï region and how to improve the carbonization techniques, as well working conditions in the different production steps was carried out in 2014 (GIZ, 2014). The Taï region is a large area in the South-West of Côte d'Ivoire, which includes the following counties: San-Pedro, Tabou, Soubré, Guiglo, and Taï. The study identified weaknesses in the charcoal sector, in the Taï region, and among them (GIZ, 2014, p.47):

- The lack of material means of the forestry administration to carry out effective control on the ground
- The weak penalties for fraudulent cuts that encourage overexploitation practices of the forest resource, which include increasing uncontrolled production by charcoal producers.

If this overexploitation is also found in other regions of the country, the reforestation done by the charcoal producer (1 hectare of plot in compensation for the production), and by the forest producer (according to his quota of wood removal of his timber extraction) would probably not be enough to maintain the same level of carbon stock, and therefore, "Condition 1" to be renewable biomass would not be met.

In the current demonstration of the renewable status of the biomass in Côte d'Ivoire, a conservative approach is taken: it is assumed that the regulated charcoal production meets the condition of sustainable management practices maintaining the carbon stock level, as in the "Condition 1", of the UNFCCC definition of renewable biomass.

Therefore, the regulated charcoal production in Côte d'Ivoire is considered to be using **renewable biomass**, and would amount to **70,533 tonnes** (See Table 2) out of the total production in the country of 1,335,383 tonnes (See Table 1) or **5.3 % of the total production**.

#### **Charcoal produced using alternative feedstocks (i.e. mixed agricultural wastes)**

As mentioned above, in Côte d'Ivoire, there is no known charcoal production done using sources other than woody biomass.

If a trivial amount of charcoal is nevertheless produced in Côte d'Ivoire using alternative feedstocks (i.e. mixed agricultural wastes), the charcoal is considered to use **renewable biomass**, as it meets "Condition 4" of the definition of renewable biomass (UNFCCC, 2006).

Consequently, the proportion of charcoal, also known as bio-charcoal, produced using alternative feedstocks, in Côte d'Ivoire is conservatively estimated at **0.1% of the total production**.

#### **Charcoal produced in the informal sector**

In 2014, a UNDP NAMA study for a sustainable value chain in Côte d'Ivoire was carried out (UNDP, 2014a).

A complementary document related to the NAMA study, named "Greening the Charcoal Value Chain in Côte d'Ivoire - a NAMA approach" (UNDP, 2014b), summarizes how a NAMA can provide a good opportunity to develop a sustainable charcoal value chain through a combined approach of policies, technology intervention, finance and capacity building.

This document states that in Côte d'Ivoire: "Charcoal production is mainly done illegally; the majority of the wood used for charcoal production is obtained without permission and the majority of carbonization is done without proper permits".

In other words, In Côte d'Ivoire, outside of the regulated charcoal production, as described above, charcoal production is done in the informal sector. The fuel/feedstock used is woody biomass from natural forests, taken where it is accessible.

This biomass is non-renewable, because it does not meet any of the five conditions described in the document "Definition of renewable biomass" (UNFCCC, 2006).

As mentioned above, the proportion of the regulated charcoal production is **5.3% of the total production**, and the proportion of charcoal produced using alternative feedstocks has been conservatively estimated at **0.1% of the total production**. Consequently, the rest of the charcoal produced in Côte d'Ivoire, which is therefore in the informal sector, amounts to **94.6%**.

Charcoal production type	Using renewable biomass	Using non-renewable biomass
Regulated charcoal production	5.3%	
Charcoal produced using alternative feedstocks (i.e. mixed agricultural wastes)	0.1 %	
Charcoal produced in the informal sector		94.6%
Total	5.4%	94.6%

**Table 4 - Proportion of charcoal produced using renewable vs non-renewable biomass in Côte d'Ivoire**

### Threshold values

According to the document "Guidance note - Standardized baselines" (UNDP, 2013), at CDM-EB 65, the UNFCCC Executive Board approved the threshold limits (additionality Ya and baseline Yb) at 80% for priority sectors (i.e. energy for households and energy generation in isolated systems), and 90% for all other sectors.

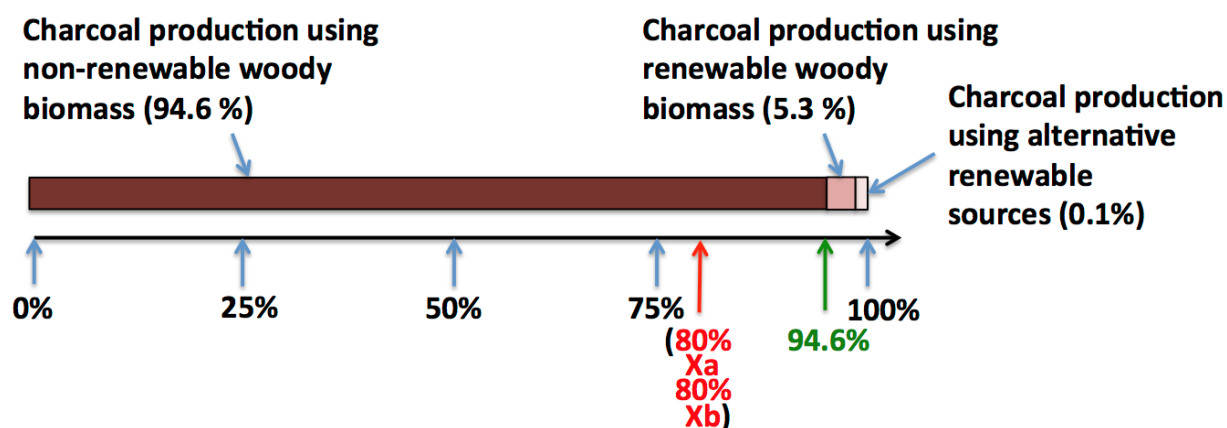
These values have been set on an interim basis, while agreeing to develop options for threshold values in consultation with relevant stakeholders and experts. As the relevant sector is a priority sector - energy for households – the threshold value of 80% is applied.

### Demonstration of additionality

In accordance with the Guidelines for the establishment of sector specific standardized baselines, version 02.0 (UNFCCC, 2011), the cumulative percentage of the output "Charcoal production for residential cooking", based on the available fuels /feedstocks, is arranged in descending order of carbon intensity of the fuels / feedstocks.

Fuels / feedstocks which have a lower carbon intensity than all the fuel/feedstock used to produce aggregately more than the approved additionality threshold Xa of 80% for the energy for households and energy generation in isolated systems, but facing barriers or that are less commercially attractive should be included in the positive list of fuels / feedstocks. A switch to any of the fuels / feedstocks in the positive list is deemed to be additional.

**Figure 1** below shows the percentage of the total output produced by each of the fuels / feedstocks, and the additionality threshold Xa (80%).



**Figure 1 – Proportion of charcoal produced by type of feedstock**

In Côte d'Ivoire, non-renewable biomass is used to produce more than 80% of charcoal production (i.e. **94.6%**), consequently the lower carbon incentive feedstocks (i.e. **renewable woody biomass** and **alternative renewable sources**, such as agricultural wastes), are included in the **positive list of fuels / feedstocks**.

A switch to **renewable woody biomass** or **alternative renewable sources** is therefore deemed to be **additional**.

## MEASURE 2: SWITCH OF TECHNOLOGY WITH OR WITHOUT CHANGE OF ENERGY SOURCE (INCLUDING ENERGY EFFICIENCY IMPROVEMENT)

Interviews were conducted with the Exploitation and Forest Industries Directorate of the Ministry of Water and Forests of Côte d'Ivoire, and with the National Union of Producers of Secondary Products of the Forest, to gather information about charcoal production technologies used in Côte d'Ivoire. The interview conclusions are presented below.

### Exploitation and Forest Industries Directorate of the Ministry of Water and Forests of Côte d'Ivoire

Interviews with officials from the Exploitation and Forest Industries Directorate of the Ministry of Water and Forests of Côte d'Ivoire, confirmed that almost all the charcoal production in Côte d'Ivoire is done using traditional earth mound kilns.

As mentioned above, the Directorate also issued an official document (Republic of Côte d'Ivoire, 2015d), dated 6 July 2015.

In section 3, entitled “Au titre des technologies utilisées” [With regards to the technologies used], the document states that, in Côte d'Ivoire, the technology used by the majority of producers is the traditional kiln. Officially, only one NGO uses metal kilns for charcoal production.

### **National Union of Producers of Secondary Products of the Forest**

The NGO which uses metal kilns, as mentioned in the Exploitation and Forest Industries Directorate's document, is MALEBI.

The current status of the technologies used for charcoal production in Côte d'Ivoire was provided to us, in an interview with the owner of MALEBI, Ms. Delphine Logbochi AHOUSI (AHOUSI, 2015), who is also a charcoal producer and a representative of the National Union of Producers of Secondary Products of the Forest.

The interview with Ms. AHOUSI confirmed that MALEBI is indeed the only company using metal kilns.

The GIZ study on the organization of the charcoal industry in the Taï region mentioned above, states that (GIZ, 2014, p. 29) the cylindrical metal kiln named Magnien is currently used by MALEBI, in the Dimbokro region, and that the results look promising.

The study also mentions (GIZ, 2014, p. 29) that the cylindrical metal kiln has already been tested by a few organizations, and among them the National Center for Agricultural Research (CNRA), in its carbonization facility of Anguédédou, which unfortunately was closed following the 2010 political unrest.

In an interview, Mr. François Pinta (Pinta, 2015) of the French Agricultural Research Centre for International Development (CIRAD), stated that, in 1992, he was in charge of the installation of the carbonization facility of Anguédédou. Mr. Pinta had put in place one cylindrical metal kiln of the Magnien type and one rectangular metal kiln of the container type, and that he had also built traditional earth mound kilns and Casamance kilns.

According to Mr. Pinta, the facility was used to hold 4 international training sessions between 1992 and 1995 on the valorization of the biomass energy, and to conduct performance tests on different types of wood found in Côte d'Ivoire.

The GIZ study also mentions (GIZ, 2014, p. 29) that charcoal producers cooperatives were created, and training sessions were conducted for the use of the metal kiln in Alépé, Dabou, Douagbafla, Mopri and Oumé, between 1995 and 1997. In addition, technical training centers (i.e. Technical College of the city of Man, and the Professional Training Centre of Yopougon) have even produced Magnien kilns in the past.

The reasons why the metal kilns are not widely used are also described.

It is stated (GIZ, 2014, pp. 29-30) that it should be remembered that in the late 1990s, the Ministry of Water and Forests undertook the task to inform the forest producers and the charcoal producers about the advantages of using the metal kiln. However, because of the lack of material and human resources, the marketing strategy turned out to be inadequate (e.g. lack of information on the costs, the point of sales, and the manufacturing). In addition, the costs were not competitive enough. Consequently, most of the charcoal producers did not have the capacity to acquire a metal kiln.

The study recommends to reintroduce the metal kilns, while learning from the lessons of the past.

### Production of charcoal using metal kilns

From the information obtained from the National Union of Producers of Secondary Products of the Forest and confirmed by the 2014 GIZ study, only one known charcoal producer uses the metal kiln in Côte d'Ivoire (i.e. MALEBI).

MALEBI uses 4 metal kilns and, in a normal situation, the total charcoal production amounts to 747 bags/month. As a bag contains 70Kg, the annual production is 627480 Kg or 627.48 tonnes.

Therefore, the production of charcoal using metal kilns in Côte d'Ivoire amounts to **627.5 tonnes**. Therefore, out of the total production in the country of 1,335,383 tonnes (See Table 1), this relates to 0.05% of the total production.

However, in this report, all the values are rounded to the nearest tenth of a percent in order to simplify, so the final value for the proportion of charcoal produced using metal kilns is **0.1%**.

### Production of charcoal using the traditional kilns

The proportion of charcoal produced with traditional kilns is calculated by subtracting the proportion of charcoal produced using the metal kilns (0.1%) from the total.

In Côte d'Ivoire, the production of charcoal using the traditional kilns amounts to **99.9%**.

Technology	Production	%
Improved kilns (i.e. metal kilns)	627.5 tonnes	0.1%
Traditional earth mound kilns	1,334,755.5 tonnes	99.9%

**Table 5 - Percentage of output (charcoal) produced by each of the technologies**

### Demonstration of additionality

Measure 2 of the "Guidelines for the establishment of sector specific standardized baselines, version 02.0" (UNFCCC, 2011), is entitled "Switch of technology with or without change of energy sources (including energy efficiency improvement)".

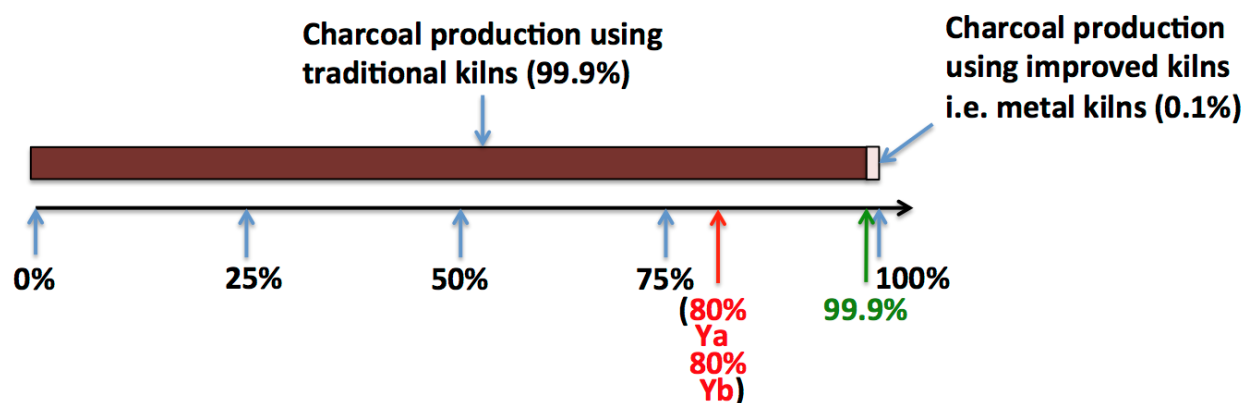
In accordance with the Guidelines, the cumulative percentage of the output "Charcoal for residential cooking", based on the available technologies, is arranged in descending order of carbon intensity of the technologies

The technologies which have a lower carbon intensity than all the technologies used to produce aggregately more than the approved additionality threshold Ya of 80% for the energy for



households and energy generation in isolated systems, and are less commercially viable as these, are additional.

**Figure 2** below shows the percentage of output produced by each of the technologies, as per Table 5, and the additionality threshold  $Y_a$  (80%).



**Figure 2 - Proportion of charcoal produced by technology**

In Côte d'Ivoire, the traditional earth mound kiln is the single technology which produces more than the additionality threshold  $Y_a$  (80%) of the total output, producing **99.9%** of the country's charcoal.

**The metal kilns and other improved kilns** are less carbon intensive than the traditional earth mound kilns and are less commercially viable as they require upfront costs and the traditional kilns have no costs. Therefore, metal kilns and other improved kilns are **additional**.

### MEASURE 3: METHANE DESTRUCTION

In Côte d'Ivoire, there is neither a mandated, nor enforced destruction of methane associated with any technology.

Without the CDM, there is no economic incentive for the destruction of methane associated with the production of charcoal.

The Ivorian DNA confirms in an official letter (Republic of Côte d'Ivoire, 2015e), that there is no legal requirement for capture and destruction of methane in charcoal production facilities.

Consequently, **any capture and destruction of methane emitted** during the pyrolysis process is **additional**.

#### Baseline identification

*Explain how the "Guidelines for the establishment of sector specific standardized baselines" were applied to identify the baseline. Document all underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.*

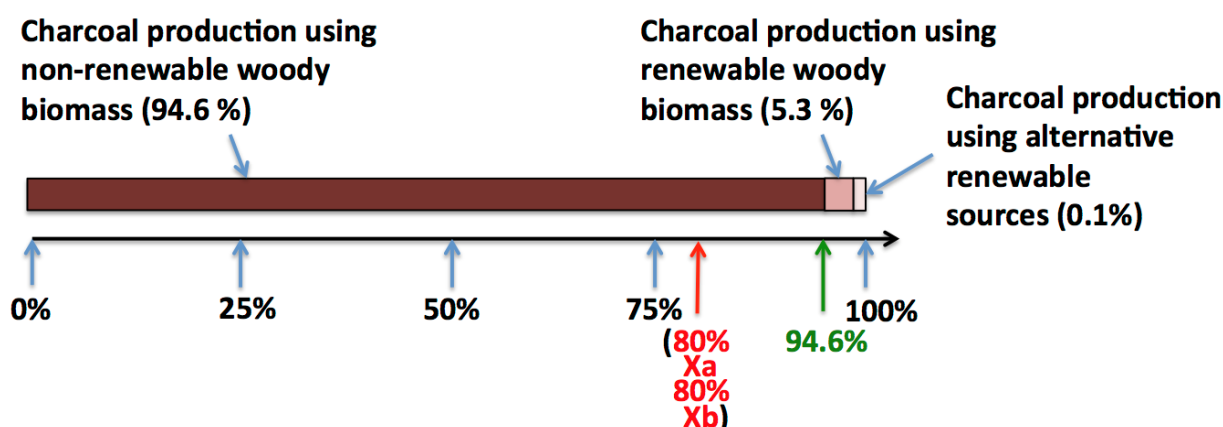
## MEASURE 1: FUEL AND FEEDSTOCK SWITCH

In accordance with Guidelines for the establishment of sector specific standardized baselines, version 02.0 (UNFCCC, 2011), the cumulative percentage of the output “Charcoal production for residential cooking”, based on the available fuels /feedstocks, is arranged in descending order of carbon intensity of the fuels / feedstocks.

The fuels/feedstocks with the highest carbon intensity and contributing to produce aggregately more than the approved baseline threshold  $X_b$  of 80% for the energy for households and energy generation in isolated systems are identified.

The fuel/feedstock with the lowest carbon intensity among them is the baseline fuel.

**Figure 1** below shows the percentage of the total output produced by each of the fuels/feedstocks, and the baseline threshold  $X_b$  (80%).



**Figure 1 - Proportion of charcoal produced by type of feedstock**

In Côte d'Ivoire, the fuel/feedstock used to produce more than 80% of the charcoal production is non-renewable woody biomass at **94.6%**.

Therefore, **non-renewable woody biomass** is the **baseline fuel**.

## MEASURE 2: SWITCH OF TECHNOLOGY WITH OR WITHOUT CHANGE OF ENERGY SOURCE (INCLUDING ENERGY EFFICIENCY IMPROVEMENT)

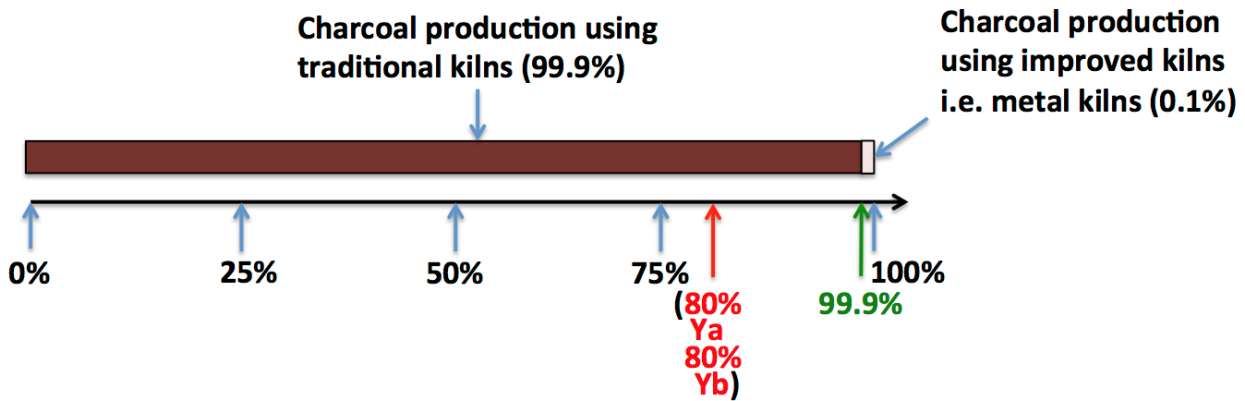
Measure 2 of the “Guidelines for the establishment of sector specific standardized baselines, version 02.0” (UNFCCC, 2011), is entitled “Switch of technology with or without change of energy sources (including energy efficiency improvement)”.

In accordance with the Guidelines, the cumulative percentage of the output “Charcoal for residential cooking”, based on the available technologies, is arranged in descending order of carbon intensity of the technologies.

The technologies with the highest carbon intensity and contributing to produce aggregately more than the approved baseline threshold  $Y_b$  of 80% for the energy for households and energy generation in isolated systems are identified.

The technology with the lowest carbon intensity among them is the baseline technology.

**Figure 2** below shows the percentage of output produced by each of the technologies, as per Table 5, and the baseline threshold Yb (80%).



**Figure 2- Proportion of charcoal produced by technology**

In Côte d'Ivoire, traditional earth mound kilns are used to produce more than 80% of the charcoal production, producing **99.9%** of the output.

**The traditional kiln** therefore is the **baseline technology**.

**MEASURE 3: METHANE DESTRUCTION**

In Côte d'Ivoire, there is neither mandated nor enforced destruction of methane associated with any technology.

Without the CDM, there is no economic incentive for the destruction of methane associated with the production of charcoal.

The Ivorian DNA confirms in an official letter (Republic of Côte d'Ivoire, 2015e), that there is no legal requirement for capture and destruction of methane in charcoal production facilities.

Consequently, **the baseline is the lack of destruction of methane emitted** during the pyrolysis process.

**Baseline parameter standardization**

*Explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to standardize a baseline parameter (e.g. baseline specific energy consumption, baseline fuel emission factor, baseline emission factor). Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.*

N/A

<b>Use of the proposed standardized baseline with approved or proposed new or revised methodology(ies)</b>
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*Explain how the proposed standardized baseline will be used together with the valid version(s) of a relevant approved methodology(ies) or proposed new/revised methodology(ies).<sup>2</sup> Describe how a standardized baseline derived from the “Guidelines for the establishment of sector specific standardized baselines” will replace the sections of demonstration of additionality, identification of the baseline scenario and/or the determination of baseline emissions in the methodology.*

N/A

<b>Validity of the proposed standardized baseline</b>
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*State the period of time for which the proposed standardized baseline is valid taking into account the provisions of the “Standard for determining coverage of data and validity of standardized baselines” and Appendix I to the “Guidelines for the establishment of sector specific standardized baselines”.*

N/A

<b>Deviations from the guidelines (if applicable)</b>
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*Provide descriptions of and justifications for the necessity and the appropriateness of any deviations from the “Guidelines for the establishment of sector specific standardized baselines” to develop the proposed standardized baseline.*

N/A

<b>References and any other relevant information</b>
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**PLEASE SEE THE “FULL LIST OF REFERENCES” AT THE END OF SECTION B.**

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<sup>2</sup> The “Guidelines for completing the proposed new baseline and monitoring methodologies form” provide guidance on the sections of the proposed new baseline and monitoring methodologies form that should be filled to develop a methodology that will only be used together with a standardized baseline.

**SECTION B: PROPOSED STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED OR PROPOSED NEW OR REVISED METHODOLOGY**

*Complete this section only when the proposed standardized baseline is developed using a methodological approach contained in the valid version of an approved methodology or in a proposed new or revised methodology(ies). An example of this is "AM0070: Manufacturing of energy efficient domestic refrigerators" to standardize the specific energy consumption of domestic refrigerators in the host country.*

**Applicability of the proposed standardized baseline**

*State the host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of region(s) within a host country, document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc.).*

Côte d'Ivoire

**Additionality standardization (if applicable)**

*Explain how the methodological approach contained in the valid version of the approved methodology(ies) or in the proposed new or revised methodology(ies) was applied to standardize additionality criterion for project activities or programmes of activities using the methodology. Document all the underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.*

N/A

**Baseline identification (if applicable)**

*Explain how the methodological approach contained in the valid version of the approved methodology(ies) or in the proposed new or revised methodology(ies) was applied to identify the baseline. Document all the underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.*

N/A

**Baseline emission parameter standardization (if applicable)**

*Explain how the methodological approach contained in the valid version of the approved methodology or in the proposed new or revised methodology was applied to standardize the baseline emission parameter (e.g. baseline specific energy consumption, baseline emission factor) of a project activity or programme of activities. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.*

**PLEASE SEE NEXT SECTION: "Use of the proposed standardized baseline with the approved or proposed new or revised methodology."**

**Use of the proposed standardized baseline with the approved or proposed new or revised methodology**

*Explain how the proposed standardized baseline will be used with the valid version of the approved methodology(ies) or proposed new or revised methodology(ies) to estimate emission reductions. Explain which parts of the methodology(ies) are replaced by the proposed standardized baseline.*

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## INTRODUCTION

The proposed standardized baseline is developed using the approved UNFCCC methodology “AMS-III.BG - Emission reduction through sustainable charcoal production and consumption, version 03.0” (UNFCCC, 2014).

## CALCULATIONS OF EMISSION REDUCTIONS

For project activities not equipped with capture and destruction of the pyrolysis gases:

### Equation A

$$ER_y = \sum_i Q_{CCP,i_y} \times \left[ \left( CF \times NCV_{wood} \times \frac{NCV_{charcoal,i}}{NCV_{charcoal,default}} \times f_{NRB,BL,wood} \times EF_{projected\_fossilfuel} \right) \right] - PE_{FF,y} - PE_{El,y} - PE_{BC,y}$$

For project activities equipped with capture and destruction of the pyrolysis gases:

### Equation B

$$ER_y = \sum_i Q_{CCP,i_y} \times \left[ \left( CF \times NCV_{wood} \times \frac{NCV_{charcoal,i}}{NCV_{charcoal,default}} \times f_{NRB,BL,wood} \times EF_{projected\_fossilfuel} \right) + (SMG_{y,b} - M_d) \times (1 - f_{NRB,BL,wood}) \times GWP_{CH4,y} \right] - PE_{y,fugitive} - PE_{y,flaring} - PE_{FF,y} - PE_{El,y} - PE_{BC,y}$$

## PROPOSED STANDARDIZED PARAMETER VALUES TO BE USED IN THE CALCULATION OF EMISSION REDUCTIONS

### $f_{NRB,BL,wood}$

Where  $f_{NRB,BL,wood}$  is the fraction of biomass of type  $i$  used in the absence of the project activity that can be established as non-renewable biomass.

The approved UNFCCC methodology “AMS-III.BG - Emission reduction through sustainable charcoal production and consumption, version 03.0” (UNFCCC, 2014) suggests to use the published DNA endorsed default value of the fraction of non-renewable biomass of the country where the project activity takes place (UNFCCC, 2015b).

In the case of Côte d'Ivoire, no default value is available. However, a default value of 93% has been calculated by the Small-Scale Working Group (Annex 14 to the report of the 37th meeting of the SSC WG), which was approved at the 68th meeting of the Board, but it has not been officially endorsed by the Ivorian DNA yet.

The demonstration done in the current project to establish the proportion of charcoal produced using non-renewable biomass in Côte d'Ivoire has resulted in the following value 94.6%, as shown in Table 4. However, the more conservative value of 93% (calculated by the Small-Scale Working Group, as mentioned above) should be applied.

The standardized value of the parameter  $f_{NRB,BL,wood}$ , in Côte d'Ivoire is therefore **93%**.

### $M_d$

Where  $M_d$  is the factor to account for any legal requirement for capture and destruction of methane in the charcoal production facility.

The standardized value (unit: t CH<sub>4</sub>/ t of raw material) of the parameter  $M_d$  is 0 in Côte d'Ivoire, and is based on an official letter (Republic of Côte d'Ivoire, 2015e), from the Ivorian DNA, which confirms that there is no legal requirement for capture and destruction of methane in charcoal production facilities.

### $SMG_{y,b}$

Where  $SMG_{y,b}$  is the specific methane generation for the baseline charcoal generation process in the year  $y$ .

This parameter value can be determined in accordance with the procedure provided in the approved UNFCCC methodology “AMS-III.K: Avoidance of methane release from charcoal production” or on the basis of the default value mentioned in the approved UNFCCC methodology “AMS-III.BG - Emission reduction through sustainable charcoal production and consumption, version 03.0” (UNFCCC, 2014).

The standardized value (unit: tonnes CH<sub>4</sub>/t charcoal product) of the parameter  $SMG_{y,b}$  is 0.030 in Côte d'Ivoire, and is based on the default value included in AMS-III.BG.

**NCV<sub>charcoal,default</sub>**

Two default NCVs for charcoal, as seen in AMS-III.B.G., are applied. One NCV is for charcoal produced from woody sources, and the other NCV is charcoal produced from other, non-woody, sources.

**Woody sources**

Where NCV<sub>charcoal,default</sub> is the net calorific value of charcoal produced using coconut husks, bamboo and other purely woody source of biomass.

As shown in Figure 1 “Proportion of charcoal produced by type of feedstock”, the proportion of charcoal produced using coconut husks, bamboo and other purely woody source of biomass is the addition of the proportion of charcoal produced using non-renewable woody biomass (94.6%), and the proportion using renewable woody biomass (5.3%) for a total **99.9%**.

The standardized value (unit: Gigajoule/t charcoal (GJ/t)) of the parameter **NCV<sub>charcoal,default</sub>** for charcoal produced from coconut husks, bamboo and other purely woody source of biomass in Côte d'Ivoire, is the IPCC NCV default value for charcoal of **29.5 GJ/tonne**, as shown in table 1.2 of the IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 – Energy (IPCC, 2006).

In the calculations of emission reductions, a weighting factor of a standardized value of **99.9%** is applied to reflect the proportion of charcoal produced with woody feedstock in Côte d'Ivoire.

**Other sources**

Where NCV<sub>charcoal,default</sub> is the net calorific value of charcoal produced using other sources (e.g. mixed agricultural wastes: agricultural residues and plant waste).

As shown in Figure 1 “Proportion of charcoal produced by type of feedstock”, the proportion of charcoal produced using alternative sources than woody biomass is **0.1%**.

The standardized value (unit: Gigajoule/t charcoal (GJ/t)) of the parameter **NCV<sub>charcoal,default</sub>** for charcoal produced from other charcoal sources (e.g. mixed agricultural wastes: agricultural residues and plant waste) in Côte d'Ivoire, is the UNFCCC default NCV value of **19.47GJ/tonne**, as shown in the approved UNFCCC methodology “AMS-III.BG - Emission reduction through sustainable charcoal production and consumption, version 03.0” (UNFCCC, 2014).

In the calculations of emission reductions, a weighting factor with a standardized value of **0.1%** is applied to reflect the proportion of charcoal produced with this feedstock.

## **TABLE OF PROPOSED STANDARDIZED PARAMETER VALUES TO BE USED IN THE CALCULATION OF EMISSION REDUCTIONS**

Under this standardized baseline, the key standardized parameter values, shown in the table below, are proposed in order to “facilitate the calculation of emission reduction and removals and/or the determination of additionality for clean development mechanism project activities, while providing assistance for assuring environmental integrity” (UNFCCC, 2011):



Standardized values proposed			
Parameter	Description	Standardized value	Unit
$f_{NRB,BL,wood}$	Fraction of biomass of type i used in the absence of the project activity that can be established as non-renewable biomass.	93	%
$M_d$	Factor to account for any legal requirement for capture and destruction of methane in the charcoal production facility.	0	t CH <sub>4</sub> / t of raw material
$SMG_{y,b}$	Specific methane generation for the baseline charcoal generation process in the year y	0.030	t CH <sub>4</sub> /t charcoal
$NCV_{charcoal,default}$	1. Net calorific value of charcoal produced from coconut husks, bamboo and other purely woody source of biomass.	29.5	Gigajoule/t charcoal
	Weighting factor applied to reflect the proportion of charcoal produced from coconut husks, bamboo and other purely woody source of biomass in Côte d'Ivoire.	99.9	%
	2. Net calorific value of charcoal produced from other sources (e.g. mixed agricultural wastes: agricultural residues and plant waste).	19.47	Gigajoule/t charcoal
	Weighting factor applied to reflect the proportion of charcoal produced from other sources (e.g. mixed agricultural wastes: agricultural residues and plant waste) in Côte d'Ivoire.	0.1	%

#### Validity of the proposed standardized baseline

*State the period of time for which the proposed standardized baseline is valid in accordance with the requirements contained in the "Standard for determining coverage of data and validity of standardized baselines".*

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This standardized baseline shall be valid for a period of 3 years from the date of approval by the EB. The standardized baseline thereafter will be updated every three years, based on the most recently available data at the time of making the updates, as well as the relevant methodological tool and guidelines.

#### Deviations from the approved methodology (if applicable)

*Provide a description of and justification for the necessity and the appropriateness of any deviation from the valid version of the approved methodology to develop the proposed standardized baseline. Also justify why a revision of the valid version of the approved methodology is not necessary.*

N/A

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**SECTION C: PROPOSED STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED OR PROPOSED NEW OR REVISED METHODOLOGICAL TOOL**

*Complete this section only when the proposed standardized baseline is developed using a methodological approach contained in the valid version of an approved methodological tool or in a proposed new or revised methodological tool (an example of this is the application of the “Tool to calculate the emission factor for an electricity system” to estimate the CO<sub>2</sub> emission factor of an electricity grid).*

**Applicability of the proposed standardized baseline**

*State the host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of region(s) within a host country, document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc.).*

N/A

**Baseline parameter standardization**

*Explain how the methodological approach contained in the valid version of the approved methodological tool or in the proposed new or revised methodological tool was applied to standardize the baseline parameter (e.g. baseline emission factor). Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.*

N/A

**Validity of the proposed standardized baseline**

*State the period of time for which the proposed standardized baseline is valid in accordance with the “Standard for determining coverage of data and validity of standardized baselines”.*

N/A

**Deviations from the approved methodological tool (if applicable)**

*Provide descriptions of and justifications for the necessity and the appropriateness of any deviations from the valid version of the approved methodological tool to develop the proposed standardized baseline. Also justify why a revision of the valid version of the approved methodological tool is not necessary.*

N/A

**References and any other relevant information**

N/A

**SECTION D: PROPOSED STANDARDIZED BASELINE DEVELOPED USING THE APPROACH CONTAINED IN THE “GUIDELINE: ESTABLISHMENT OF STANDARDIZED BASELINES FOR AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM”**

*Complete this section only when the proposed standardized baseline is developed using the approach contained in the guideline “Establishment of standardized baselines for afforestation and reforestation project activities under the CDM”.*

**Applicability of the proposed standardized baseline**

*Provide the information on the host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of region(s) within a host country, document transparently the geographical boundaries of the region(s) (e.g. administrative units, geo-referenced coordinates).*

N/A

**Additionality standardization**

*Explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to standardize the additionality criterion for afforestation and reforestation CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Document all relevant data sources, assumptions, steps and outcomes in a clear and transparent manner.*

N/A

**Baseline land-use scenario identification**

*Explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to identify the baseline land-use scenario of afforestation and reforestation CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Document all relevant data sources, assumptions, steps and outcomes in a clear and transparent manner.*

N/A

**Standardization of baseline carbon stocks and GHG removals estimation (if applicable)**

*Explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to standardize the estimation of baseline carbon stocks and GHG removals of applicable afforestation and reforestation CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.*

N/A

**Land eligibility demonstration (if applicable)**

*Explain whether eligibility of the lands included under the scope of the proposed standardized baseline for the CDM is confirmed by the proposed standardized baseline. If not, explain whether well-defined approaches for demonstrating eligibility of lands for the CDM have been provided which will help the project participants in demonstrating eligibility of the lands under their projects. In either case, document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.*

N/A

**Validity of the proposed standardized baseline**

*State the period of time for which the proposed standardized baseline is valid.*

N/A

**Deviations from the guideline (if applicable)**

*Provide descriptions of and justifications for the necessity and the appropriateness of any deviations from the "Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM" to develop the proposed standardized baseline.*

N/A

**References and any other relevant information**

N/A

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