



CDM Methodologies and designing a methodology for the NAMA



Federico A. Canu
UNEP DTU Partnership

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Methodology for GHG reduction calculation

CDM: ASB0002

Standardized baseline: Fuel switch, technology switch and methane destruction in the charcoal sector (Uganda)

Based on CDM methodology AMS-III.BG:

Small-scale Methodology: Emission reduction through sustainable charcoal production and consumption



Mozambique: 91%

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	0.82	Default values of fraction of non-renewable biomass can be retrieved at: http://cdm.unfccc.int/DNA/fNRB/index.html
M_d	tonne of CH ₄ /tonne of raw material	Factor to account for any legal requirement for capture and destruction of methane in the charcoal production facility	0	Based on the data provided in PSB0001
$SMG_{y,b}$	tonnes CH ₄ /t charcoal product	Specific methane generation for the baseline charcoal generation process in the year y ;	0.030	Based on the data provided in PSB0001 and AMS-III.BG.

Default values of fraction of non-renewable biomass

The CDM Executive Board, at its sixty-seventh meeting, approved the approach to calculate the values of fraction of non-renewable biomass (fNRB) for least developed countries (LDC) and small island developing states (SIDS) and Parties with 10 or less approved CDM project activities as of 31 December 2010, as indicated in annex D2 to its meeting report.

The fNRB values approved by the Board are indicated in the following documents:

- Annex D2 to the report of the 67th meeting of the CDM Executive Board (Board)
- Annex D2 to the report of the 67th meeting of the Small States Working Group (SSWG) which was approved at the 68th meeting of the Board
- Annex D2 to the report of the 67th meeting of the SDC-100 which was approved at the 70th meeting of the Board
- Annex D2 to the report of the 68th meeting of the SDC-100 which was approved at the 70th meeting of the Board
- Annex D2 to the report of the 69th meeting of the SDC-100 which was approved at the 71st meeting of the Board
- Annex D2 to the report of the 70th meeting of the SDC-100 which was approved at the 71st meeting of the Board

When acceptance is received from designated national authorities (DNAs), the default values can be applied in small-scale CDM project activities and programme of activities in the respective host countries.

CDMAs are requested to use the form <http://cdm.unfccc.int/310118> to indicate their acceptance of the proposed default fNRB values, and send it email to secretariat@cdm.int.

Table 1 lists the countries whose DNAs have indicated their acceptance to the proposed default values of fNRB.

Country	Default values of fNRB	Date of acceptance by DNAs
Republic of Angola	81%	17 April 2012
Kingdom of Bahrain	100%	22 April 2012
Republic of Burkina Faso	80%	29 March 2011
Republic of Burundi	71%	20 September 2012
Cameroon	70%	22 September 2014
Republic of Cape Verde	85%	28 November 2013
Republic of Chad	82%	11 April 2012
Comoros	100%	17 November 2014
Democratic Republic of Congo	80%	10 July 2012
Democratic Republic of the Congo	81%	21 October 2013
Federal Democratic Republic of Ethiopia	80%	30 April 2012
Republic of the Gambia	81%	11 April 2012
Georgia	74%	11 July 2013
Republic of Ghana	85%	20 October 2013
Republic of Guinea	80%	20 December 2013
Republic of Guinea-Bissau	80%	21 October 2013
Commonwealth of Jamaica	80%	11 April 2012
Republic of Kenya	82%	18 September 2012
Republic of Liberia	81%	17 April 2012
Republic of Madagascar	70%	23 July 2012
Republic of Malawi	81%	12 June 2012
Republic of Mali	70%	20 August 2012
Republic of Mozambique	91%	21 December 2012

PROPOSAL FOR A NEW STANDARDISED BASELINE FOR CHARCOAL PROJECTS IN THE CLEAN DEVELOPMENT MECHANISM

Key default values proposed:

Parameter	Description	Default value	Unit
K_{CH_4}	Emission factor for methane emissions as found in the consolidated GHG database for the informal charcoal sector	6.5128	tCH ₄ /t charcoal
K_{CO_2}	Emission factor for CO ₂ emissions as found in the consolidated GHG database for the informal charcoal sector	0.0382	tCO ₂ e/t charcoal
$CF_{NCV,i,y}$	Correction factor for the project to baseline net calorific value of charcoal product i in year y		
	Charcoal from mixed plantations, coconut shells and bamboo.	1	-
	Any type of biomass mix which includes dried agricultural wastes	0.66	-
CC_w	Carbon content in wood	0.45 ¹	tC/t wood

I assume no legal requirement for capture and destruction of methane in Mozambique

Default value

$$\begin{aligned}
 ER_y = & \sum_i Q_{CCP,i_y} \\
 & \times \left[\left(CF \times NCV_{wood} \times \frac{NCV_{charcoal,i}}{NCV_{charcoal,default}} \times f_{NRB,BL,wood} \right. \right. \\
 & \times \left. \left. EF_{projected_fossilfuel} \right) + (SMG_{y,b} - M_d) \right. \\
 & \times \left. (1 - f_{NRB,BL,wood}) \times GWP_{CH_4,y} \right] - PE_{y,fugitive} \\
 & - PE_{y,flaring} - PE_{FF,y} - PE_{El,y} - PE_{BC,y}
 \end{aligned}$$

Is this complexity necessary from the start?

You can make your own methodology, based on your specific requirements

- % of increased efficiency in new kilns = assumed % of decreased deforestation.

AR-AMS0007: Afforestation and reforestation project activities implemented on lands other than wetlands ---
Version 3.1

"Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/RCDM project activities"

Other relevant CDM methodology litterature

ACM0021 Reduction of emissions from charcoal production by improved kiln design and-or abatement of methane

AM0041 Mitigation of Methane Emissions in the Wood Carbonization Activity for Charcoal Production



Large scale afforestation and reforestation methodologies ⓘ



- + **Approved large scale afforestation and reforestation methodologies**
- + Proposed new A/R methodologies [Pending | Finalized]

Requests for:

- + Clarification of approved A/R methodologies [Pending | Finalized]
- + Revision of approved A/R methodologies [Pending | Finalized]
- + Clarification on application of approved A/R methodological tools [Pending | Finalized]
- + Revision of approved A/R methodological tools [Pending | Finalized]

Small scale afforestation and reforestation methodologies ⓘ



- + **Approved small scale afforestation and reforestation methodologies**

Requests for:

- + Clarification and revision of approved small-scale A/R methodologies [Pending | Finalized]