

## Information note

### Default values of fraction of non-renewable biomass for Parties with 10 or less registered CDM project activities as of 31 December 2010

#### I. Background

- Paragraph 46 of decision 3/CMP.6 requests the Executive Board (hereinafter referred to as the Board) of the clean development mechanism (CDM) to develop standardized baselines, as appropriate, in consultation with relevant designated national authorities, prioritizing methodologies that are applicable to least developed countries (LDCs), small island developing States (SIDS), Parties with 10 or fewer registered clean development mechanism project activities as of 31 December 2010 and underrepresented project activity types or regions, inter alia, for energy generation in isolate systems.
- To respond to the mandate from CMP.6, through the work programmes of the Small-Scale Working Group (SSC WG) and CDM management action plan (MAP) 2012, the Board tasked the SSC WG and the secretariat to work on the methodologies AMS-I.E “Switch from Non-Renewable Biomass for Thermal Applications by the User” and AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass”. Taking into account the public inputs received in response to the call for inputs opened at the sixty-third meeting of the Board, the SSC WG at its thirty-fifth meeting provided feedback to the secretariat on the options for developing country-specific default values for the fraction of non-renewable biomass (fNRB).
- The Board, at its sixty-seventh meeting approved the approach to calculate the fNRB values as indicated in the information note annexed to that meeting report (EB 67, annex 22), for LDCs, SIDS and Parties with 10 or less registered CDM project activities as of 31 December 2010.<sup>1</sup> It also approved the values for LDCs, SIDS contained in the information note. The Board further requested the secretariat, in consultation with the SSC WG, to continue to determine fNRB factors for Parties with 10 or less registered CDM project activities as of 31 December 2010 and recommend to the Board default values for application in these countries.

#### II. Default values of fNRB

- The default values of fNRB for Parties with 10 or less registered CDM project activities as of 31 December 2010 are summarized in Table 1 below and the detailed calculation for the proposed default values is shown in appendix 1. Values for Kyrgyzstan, Serbia and Uruguay and Malta were not included in this version as with the available data meaningful results could not be obtained.

**Table 1: Country-specific default values for the fraction of non-renewable biomass**

Country	Default values of fNRB
Algeria	88%
Botswana	88%
Cameroon	70%
Côte d'Ivoire	93%
Egypt	100% **

<sup>1</sup> The list of countries whose designated national authorities (DNAs) have indicated their acceptance of the proposed fNRB values is available on the UNFCCC CDM website  
<<http://cdm.unfccc.int/DNA/fNRB/index.html>>

<b>Country</b>	<b>Default values of fNRB</b>
Gabon	84%
Ghana	99%
Kenya	92%
Libyan Arab Jamahiriya	85%
Morocco	93%
Namibia	93%
Nigeria	93%
Swaziland	85%
Tunisia	93%
Zimbabwe	97%
Cyprus	45%
Democratic People's Republic of Korea	90%
Iran (Islamic Republic of)	84%
Jordan	64%
Kuwait	100% **
Lebanon	97%
Mongolia	66%
Oman	100% **
Qatar	100% **
Saudi Arabia	100% **
Sri Lanka	88%
Syrian Arab Republic	74%
Tajikistan	89%
Turkmenistan	85%
United Arab Emirates	100% **
Uzbekistan	94%
Albania	79%
Armenia	85%
Azerbaijan	85%
Georgia	74%
Montenegro	98%
Republic of Moldova	83%
The former Yugoslav Republic of Macedonia	85%
Bolivia	84%
Costa Rica	81%
El Salvador	93%
Nicaragua	61%
Panama	40%
Paraguay	92%

## Appendix 1

## CALCULATION FOR THE DEFAULT VALUES OF fNRB

Country	F Extent of Forest (ha)	GR Growth Rate of biomass (t/ha-yr)	MAI Mean Annual Increment (t/yr)	$\Delta F$ Annual Change in Living Forest Biomass (t/yr)	R Total Annual Biomass Removals (t/yr)	PA Protected Areas Extent of Forest (ha)	DRB Biomass Growth in Protected Areas (t/yr)	NRB Total Annual Removals - Protected Area Growth (t/yr)	fNRB fNRB = NRB/(NRB+ DRB)
Algeria	1,492,000	2.10	3,129,843	-	3,129,843	173,000	362,911	2,766,932	88%
Botswana	11,351,000	1.72	19,469,803	(4,000,000)	23,469,803	1,702,650	2,920,470	20,549,332	88%
Cameroon	19,916,000	5.88	117,011,479	(60,000,000)	177,011,479	9,105,000	53,494,151	123,517,328	70%
Côte d'Ivoire	10,403,000	5.29	55,052,676	(2,000,000)	57,052,676	808,000	4,275,936	52,776,740	93%
Egypt	70,000	0.00	0	-	-	20,000	0	-	100% **
Gabon	22,000,000	6.51	143,121,000	-	143,121,000	3,434,000	22,339,887	120,781,113	84%
Ghana	4,940,000	4.53	22,365,850	(16,000,000)	38,365,850	43,000	194,683	38,171,168	99%
Kenya	3,467,000	2.10	7,285,034	(6,000,000)	13,285,034	520,050	1,092,755	12,192,279	92%
Libyan Arab Jamahiriya	217,000	1.51	328,104	-	328,104	32,550	49,216	278,888	85%
Morocco	5,131,000	2.13	10,923,899	-	10,923,899	376,000	800,504	10,123,395	93%
Namibia	7,290,000	1.47	10,749,105	(4,000,000)	14,749,105	689,000	1,015,931	13,733,175	93%
Nigeria	9,041,000	3.43	31,046,794	(92,000,000)	123,046,794	2,509,000	8,615,906	114,430,888	93%
Swaziland	563,000	2.14	1,203,976	-	1,203,976	84,450	180,596	1,023,379	85%
Tunisia	1,006,000	2.11	2,123,666	-	2,123,666	71,000	149,881	1,973,785	93%

Country	F Extent of Forest (ha)	GR Growth Rate of biomass (t/ha-yr)	MAI Mean Annual Increment (t/yr)	ΔF Annual Change in Living Forest Biomass (t/yr)	R Total Annual Biomass Removals (t/yr)	PA Protected Areas Extent of Forest (ha)	DRB Biomass Growth in Protected Areas (t/yr)	NRB Total Annual Removals - Protected Area Growth (t/yr)	fNRB fNRB = NRB/(NRB+ DRB)
Zimbabwe	15,624,000	2.10	32,853,366	(20,000,000)	52,853,366	801,000	1,684,303	51,169,063	97%
Cyprus	173,000	3.75	648,750	-	648,750	95,000	356,250	292,500	45%
Democratic People's Republic of Korea	5,666,000	4.00	22,664,000	(8,000,000)	30,664,000	780,000	3,120,000	27,544,000	90%
Iran (Islamic Republic of)	11,075,000	4.50	49,840,269	2,000,000	47,840,269	1,661,250	7,476,040	40,364,228	84%
Jordan	98,000	3.15	308,700	-	308,700	35,000	110,250	198,450	64%
Kuwait	6,000	0.00	0	- *	-	900	0	-	100% **
Lebanon	137,000	3.70	506,352	-	506,352	4,000	14,784	491,568	97%
Mongolia	10,898,000	1.92	20,924,160	(8,000,000)	28,924,160	5,152,000	9,891,840	19,032,320	66%
Oman	2,000	0.00	0	- *	-	300	0	-	100% **
Qatar	0	0.00	0	-	-	-	0	-	100% **
Saudi Arabia	977,000	0.00	0	-	-	146,550	0	-	100% **
Sri Lanka	1,860,000	4.25	7,910,580	(2,000,000)	9,910,580	279,000	1,186,587	8,723,993	88%
Syrian Arab Republic	491,000	3.56	1,746,978	382,800 *	1,364,178	100,000	355,800	1,008,378	74%
Tajikistan	410,000	2.85	1,168,500	-	1,168,500	44,000	125,400	1,043,100	89%
Turkmenistan	4,127,000	0.08	309,525	-	309,525	619,050	46,429	263,096	85%
United Arab Emirates	317,000	0.00	0	-	-	47,550	0	-	100% **
Uzbekistan	3,276,000	1.56	5,110,560	-	5,110,560	210,000	327,600	4,782,960	94%

Country	F Extent of Forest (ha)	GR Growth Rate of biomass (t/ha-yr)	MAI Mean Annual Increment (t/yr)	ΔF Annual Change in Living Forest Biomass (t/yr)	R Total Annual Biomass Removals (t/yr)	PA Protected Areas Extent of Forest (ha)	DRB Biomass Growth in Protected Areas (t/yr)	NRB Total Annual Removals - Protected Area Growth (t/yr)	fNRB fNRB = NRB/(NRB+ DRB)
Albania	776,000	3.53	2,740,250	-	2,740,250	162,000	572,063	2,168,188	79%
Armenia	262,000	2.70	708,383	-	708,383	39,300	106,257	602,125	85%
Azerbaijan	936,000	3.17	2,970,630	-	2,970,630	140,400	445,595	2,525,036	85%
Georgia	2,742,000	3.23	8,853,233	2,000,000	6,853,233	551,000	1,779,041	5,074,191	74%
Montenegro	543,000	3.77	2,047,110	-	2,047,110	13,000	49,010	1,998,100	98%
Republic of Moldova	386,000	3.80	1,466,800	-	1,466,800	64,000	243,200	1,223,600	83%
The former Yugoslav Republic of Macedonia	998,000	3.53	3,521,693	-	3,521,693	149,700	528,254	2,993,439	85%
Bolivia	57,196,000	5.05	288,782,604	(48,000,000)	336,782,604	10,680,000	53,923,320	282,859,284	84%
Costa Rica	2,605,000	7.17	18,688,270	4,000,000	14,688,270	390,750	2,803,241	11,885,030	81%
El Salvador	287,000	4.30	1,233,957	(773,200) *	2,007,157	32,000	137,584	1,869,573	93%
Nicaragua	3,114,000	8.02	24,972,723	(16,000,000)	40,972,723	2,018,000	16,183,351	24,789,372	61%
Panama	3,251,000	7.70	25,026,198	(2,000,000)	27,026,198	2,116,000	16,288,968	10,737,230	40%
Paraguay	17,582,000	2.70	47,480,191	(45,698,700) *	93,178,891	2,637,300	7,122,029	86,056,862	92%

\* Annual Change in Living Forest Biomass was not reported for Kuwait, Oman, Syrian Arab Republic, El Salvador, Paraguay and Uruguay. Value assumed to be zero in Kuwait given n.s. (not significant) Change in Extent of Forest 2005-2010 (FAO FRA 2010, Table 3). Value assumed to be zero in Oman given 0% Change in Extent of Forest 2005-2010 (FAO FRA 2010, Table 3). Value in Syrian Arab Republic calculated as Annual Change Rate 2005-2010 of Forest Extent (6,000ha/yr from FRA 2010 Table 3) multiplied by Average Biomass Density in Western and Central Asia (63.8 t/ha, calculated from FAO FRA 2010,

Table 11, divided by 2003 IPCC carbon stock:biomass conversion factor). Value in El Salvador calculated as Annual Change Rate 2005-2010 of Forest Extent (-4,000ha/yr from FRA 2010 Table 3) multiplied by Average Biomass Density in Central America (193.3 t/ha, calculated from FAO FRA 2010, Table 11, divided by 2003 IPCC carbon stock:biomass conversion factor). Value in Paraguay calculated as Annual Change Rate 2005-2010 of Forest Extent (-179,000ha/yr from FRA 2010 Table 3) multiplied by Average Biomass Density in South America (255.3 t/ha, calculated from FAO FRA 2010, Table 11, divided by 2003 IPCC carbon stock:biomass conversion factor). Value in Uruguay calculated as Annual Change Rate 2005-2010 of Forest Extent (45,000ha/yr from FRA 2010 Table 3) multiplied by Average Biomass Density in South America (255.3 t/ha, calculated from FAO FRA 2010, Table 11, divided by 2003 IPCC carbon stock:biomass conversion factor).

\*\* For Egypt, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates, the ecological zone of the forest is tropical/sub-tropical desert where the growth rate is zero, resulting in no Mean Annual Increment. The fraction of NRB is considered to be 100%.

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**History of the document**

Version	Date	Nature of revision
01.0	20 July 2012	EB 68, Annex # To be considered at EB 68.
<p><b>Decision Class:</b> Regulatory  <b>Document Type:</b> Information note  <b>Business Function:</b> Methodology</p>		