Monitoring report form

(Version 04.0)

Complete this form in accordance with the Attachment "Instructions for filling out the monitoring report form" at the end of this form.

MONITORING REPORT	
Title of the project activity	PoA for the Reduction of emission from non-renewable fuel from cooking at household level
Reference number of the project activity	PoA 7359. CPA reference numbers: 7359-0002 (CPA 2) 7359-0003 (CPA 3) 7359-0004 (CPA 4) 7359-0005 (CPA 5) 7359-0006 (CPA 6) 7359-0007 (CPA 7) 7359-0008 (CPA 8) 7359-0009 (CPA 9) 7359-0010 (CPA 10) 7359-0011 (CPA 11) 7359-0012 (CPA 12) 7359-0013 (CPA 13) 7359-0014 (CPA 14) 7359-0015 (CPA 15) 7359-0016 (CPA 16) 7359-0017 (CPA 17) 7359-0018 (CPA 18) 7359-0019 (CPA 19) 7359-0020 (CPA 20) 7359-0021 (CPA 21) 7359-0022 (CPA 22) 7359-0023 (CPA 23) 7359-0024 (CPA 24) 7359-0025 (CPA 25) 7359-0026 (CPA 26) 7359-0027 (CPA 27) 7359-0028 (CPA 28) 7359-0029 (CPA 29) 7359-0030 (CPA 30) 7359-0031 (CPA 31) 7359-0032 (CPA 32) 7359-0033 (CPA 33) 7359-0034 (CPA 34) 7359-0035 (CPA 35) 7359-0036 (CPA 36) 7359-0037 (CPA 37)

	7359-0038 (CPA 38) 7359-0039 (CPA 39) 7359-0040 (CPA 40) 7359-0041 (CPA 41) 7359-0042 (CPA 42) 7359-0043 (CPA 43) 7359-0044 (CPA 44) 7359-0045 (CPA 45) 7359-0046 (CPA 46) 7359-0047 (CPA 47) 7359-0048 (CPA 48) 7359-0049 (CPA 49) 7359-0050 (CPA 50) 7359-0051 (CPA 51) 7359-0052 (CPA 52) 7359-0053 (CPA 53) 7359-0054 (CPA 54) 7359-0055 (CPA 55) 7359-0056 (CPA 56) 7359-0057 (CPA 57)
Version number of the monitoring report	08
Completion date of the monitoring report	22/01/2015
Registration date of the project activity	30/11/2012
Monitoring period number and duration of this monitoring period	Monitoring period: 01

	Start of Monitoring Period	End of Monitoring Period	Monitoring period in days
CPA 2	28/05/2014	10/12/2014	197
CPA 3	28/05/2014	10/12/2014	197
CPA 4	28/05/2014	10/12/2014	197
CPA 5	28/05/2014	10/12/2014	197
CPA 6	28/05/2014	10/12/2014	197
CPA 7	28/05/2014	10/12/2014	197
CPA 8	28/05/2014	10/12/2014	197
CPA 9	28/05/2014	10/12/2014	197
CPA 10	28/05/2014	10/12/2014	197
CPA 11	28/05/2014	10/12/2014	197
CPA 12	28/05/2014	10/12/2014	197
CPA 13	28/05/2014	10/12/2014	197
CPA 14	28/05/2014	10/12/2014	197

	CPA 15	28/05/2014	10/12/2014	197
	CPA 16	28/05/2014	10/12/2014	197
	CPA 17	28/05/2014	10/12/2014	197
	CPA 18	28/05/2014	10/12/2014	197
	CPA 19	28/05/2014	10/12/2014	197
	CPA 20	28/05/2014	10/12/2014	197
	CPA 21	28/05/2014	10/12/2014	197
	CPA 22	28/05/2014	10/12/2014	197
	CPA 23	28/05/2014	10/12/2014	197
	CPA 24	28/05/2014	10/12/2014	197
	CPA 25	28/05/2014	10/12/2014	197
	CPA 26	28/05/2014	10/12/2014	197
	CPA 27	28/05/2014	10/12/2014	197
	CPA 28	28/05/2014	10/12/2014	197
	CPA 29	28/05/2014	10/12/2014	197
	CPA 30	28/05/2014	10/12/2014	197
	CPA 31	28/05/2014	10/12/2014	197
	CPA 32	28/05/2014	10/12/2014	197
	CPA 33	28/05/2014	10/12/2014	197
	CPA 34	28/05/2014	10/12/2014	197
	CPA 35	28/05/2014	10/12/2014	197
	CPA 36	28/05/2014	10/12/2014	197
	CPA 37	28/05/2014	10/12/2014	197
	CPA 38	28/05/2014	10/12/2014	197
	CPA 39	28/05/2014	10/12/2014	197
	CPA 40	28/05/2014	10/12/2014	197
	CPA 41	28/05/2014	10/12/2014	197
	CPA 42	28/05/2014	10/12/2014	197
	CPA 43	28/05/2014	10/12/2014	197
	CPA 44	28/05/2014	10/12/2014	197
	CPA 45	28/05/2014	10/12/2014	197
	CPA 46	28/05/2014	10/12/2014	197
	CPA 47	28/05/2014	10/12/2014	197
	CPA 48	28/05/2014	10/12/2014	197
	CPA 49	28/05/2014	10/12/2014	197
	CPA 50	28/05/2014	10/12/2014	197
	CPA 51	28/05/2014	10/12/2014	197
	CPA 52	28/05/2014	10/12/2014	197
	CPA 53	28/05/2014	10/12/2014	197
	CPA 54	28/05/2014	10/12/2014	197
	CPA 55	28/05/2014	10/12/2014	197
	CPA 56	28/05/2014	10/12/2014	197
	CPA 57	28/05/2014	10/12/2014	197
Project participant(s)	Green Development AS			
Host Party(ies)	Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Uganda, Zambia, Chad, Dominican Republic, Ivory Coast, Liberia, Namibia, Rwanda, Sierra Leone, Somalia, Ghana, South Africa.			

Sectoral scope and selected methodology(ies), and where applicable, applied standardized baseline(s)	AMS I.E., Version 04, Sectoral Scope: 01
Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD	CPA 2 80,435 tCO2 CPA 3 80,232 tCO2 CPA 4 65,150 tCO2 CPA 5 55,060 tCO2 CPA 6 52,703 tCO2 CPA 7 66,839 tCO2 CPA 8 46,863 tCO2 CPA 9 37,719 tCO2 CPA 10 77,714 tCO2 CPA 11 77,067 tCO2 CPA 12 55,070 tCO2 CPA 13 68,068 tCO2 CPA 14 77,546 tCO2 CPA 15 70,568 tCO2 CPA 16 40,604 tCO2 CPA 17 47,453 tCO2 CPA 18 82,057 tCO2 CPA 19 82,109 tCO2 CPA 20 78,406 tCO2 CPA 21 80,007 tCO2 CPA 22 74,043 tCO2 CPA 23 80,991 tCO2 CPA 24 23,231 tCO2 CPA 25 26,461 tCO2 CPA 26 23,516 tCO2 CPA 27 38,341 tCO2 CPA 28 37,436 tCO2 CPA 29 38,101 tCO2 CPA 30 37,242 tCO2 CPA 31 37,394 tCO2 CPA 32 36,882 tCO2 CPA 33 36,553 tCO2 CPA 34 34,665 tCO2 CPA 35 24,137 tCO2 CPA 36 37,384 tCO2 CPA 37 26,853 tCO2 CPA 38 26,639 tCO2 CPA 39 23,882 tCO2 CPA 40 30,822 tCO2 CPA 41 32,963 tCO2

	CPA 42	50,187 tCO2
	CPA 43	46,830 tCO2
	CPA 44	47,592 tCO2
	CPA 45	62,888 tCO2
	CPA 46	54,947 tCO2
	CPA 47	58,584 tCO2
	CPA 48	57,953 tCO2
	CPA 49	49,709 tCO2
	CPA 50	55,650 tCO2
	CPA 51	34,092 tCO2
	CPA 52	47,411 tCO2
	CPA 53	70,498 tCO2
	CPA 54	63,160 tCO2
	CPA 55	41,544 tCO2
	CPA 56	54,931 tCO2
	CPA 57	68,899 tCO2
	Total PoA	2,9514,081 tCO2
	Emission reduction in tCO2 in 2014	
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	CPA 2	0 tCO2
	CPA 3	0 tCO2
	CPA 4	0 tCO2
	CPA 5	0 tCO2
	CPA 6	0 tCO2
	CPA 7	0 tCO2
	CPA 8	0 tCO2
	CPA 9	0 tCO2
	CPA 10	0 tCO2
	CPA 11	0 tCO2
	CPA 12	0 tCO2
	CPA 13	0 tCO2
	CPA 14	0 tCO2
	CPA 15	0 tCO2
	CPA 16	0 tCO2
	CPA 17	0 tCO2
	CPA 18	0 tCO2
	CPA 19	0 tCO2
	CPA 20	0 tCO2
	CPA 21	0 tCO2
	CPA 22	0 tCO2
	CPA 23	0 tCO2
	CPA 24	0 tCO2
	CPA 25	0 tCO2
	CPA 26	0 tCO2
	CPA 27	0 tCO2
	CPA 28	0 tCO2
	CPA 29	0 tCO2
	CPA 30	0 tCO2
	CPA 31	0 tCO2
	CPA 32	0 tCO2

	CPA 33	0 tCO2
	CPA 34	0 tCO2
	CPA 35	0 tCO2
	CPA 36	0 tCO2
	CPA 37	0 tCO2
	CPA 38	0 tCO2
	CPA 39	0 tCO2
	CPA 40	0 tCO2
	CPA 41	0 tCO2
	CPA 42	43,997 tCO2
	CPA 43	0 tCO2
	CPA 44	0 tCO2
	CPA 45	0 tCO2
	CPA 46	0 tCO2
	CPA 47	1,964 tCO2
	CPA 48	0 tCO2
	CPA 49	300,193 tCO2
	CPA 50	0 tCO2
	CPA 51	0 tCO2
	CPA 52	997,839 tCO2
	CPA 53	0 tCO2
	CPA 54	0 tCO2
	CPA 55	0 tCO2
	CPA 56	0 tCO2
	CPA 57	0 tCO2
	Total PoA	**1,343,993** tCO2
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period up to 31 December 2012(if applicable)	Not Applicable	
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period from 1 January 2013 onwards (if	1,343,993 tCO2	

applicable).	

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

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The purpose of the project activities is to reduce the demand for wood and charcoal and to contribute to a sustainable development.

a. Purpose of the project activity and the measures taken for GHG emission reductions or net anthropogenic GHG removals by sinks;

The purpose of the project activity is to use carbon finance for the dissemination of solution that will reduce the use of non-renewable fuel for cooking. The project activity will reduce CO2 emission by replacing the use of non-renewable fuel for cooking with clean renewable fuel, and by providing solutions that provide clean drinking water to the households so that they do not need to boil water.

b. Brief description of the installed technology and equipment;

The technology and equipment include ethanol stoves, biogas stoves, and water purification systems.

c. Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.);

PoA registration date	30/11/2012
Date of latest version of PoA DD	14/12/2013
Start date for CPA 42	01/05/2014
Start date for CPA 47	01/05/2014
Start date for CPA 49	01/05/2014
Start date for CPA 52	11/11/2013
Inclusion date for CPA 42	28/05/2014
Inclusion date for CPA 47	28/05/2014
Inclusion date for CPA 49	28/05/2014
Inclusion date for CPA 52	28/05/2014
Inclusion date for CPA 58 and 59	16/12/2014
First Monitoring period	28/05/2014 - 10/12/2014

CPA 1, which is not included in this monitoring report, will be terminated and removed from the program as we have been unable to make the Post Registration Changes that the CDM team required, even after such Post registration Change to change the start of the crediting period had been validated by DOE. The CDM Regional Collaboration Centre in Kampala has implied that they will assist us in clarifying how we will go about to cancel CPA 1 from the program.

d. Total GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period.

	CPA	Emission Reduction
Emission Reduction in Monitoring Period for	CPA 2	0 tCO2
Emission Reduction in Monitoring Period for	CPA 3	0 tCO2
Emission Reduction in Monitoring Period for	CPA 4	0 tCO2

Emission Reduction in Monitoring Period for	CPA 5	0 tCO2
Emission Reduction in Monitoring Period for	CPA 6	0 tCO2
Emission Reduction in Monitoring Period for	CPA 7	0 tCO2
Emission Reduction in Monitoring Period for	CPA 8	0 tCO2
Emission Reduction in Monitoring Period for	CPA 9	0 tCO2
Emission Reduction in Monitoring Period for	CPA 10	0 tCO2
Emission Reduction in Monitoring Period for	CPA 11	0 tCO2
Emission Reduction in Monitoring Period for	CPA 12	0 tCO2
Emission Reduction in Monitoring Period for	CPA 13	0 tCO2
Emission Reduction in Monitoring Period for	CPA 14	0 tCO2
Emission Reduction in Monitoring Period for	CPA 15	0 tCO2
Emission Reduction in Monitoring Period for	CPA 16	0 tCO2
Emission Reduction in Monitoring Period for	CPA 17	0 tCO2
Emission Reduction in Monitoring Period for	CPA 18	0 tCO2
Emission Reduction in Monitoring Period for	CPA 19	0 tCO2
Emission Reduction in Monitoring Period for	CPA 20	0 tCO2
Emission Reduction in Monitoring Period for	CPA 21	0 tCO2
Emission Reduction in Monitoring Period for	CPA 22	0 tCO2
Emission Reduction in Monitoring Period for	CPA 23	0 tCO2
Emission Reduction in Monitoring Period for	CPA 24	0 tCO2
Emission Reduction in Monitoring Period for	CPA 25	0 tCO2
Emission Reduction in Monitoring Period for	CPA 26	0 tCO2
Emission Reduction in Monitoring Period for	CPA 27	0 tCO2
Emission Reduction in Monitoring Period for	CPA 28	0 tCO2
Emission Reduction in Monitoring Period for	CPA 29	0 tCO2
Emission Reduction in Monitoring Period for	CPA 30	0 tCO2
Emission Reduction in Monitoring Period for	CPA 31	0 tCO2
Emission Reduction in Monitoring Period for	CPA 32	0 tCO2
Emission Reduction in Monitoring Period for	CPA 33	0 tCO2
Emission Reduction in Monitoring Period for	CPA 34	0 tCO2
Emission Reduction in Monitoring Period for	CPA 35	0 tCO2
Emission Reduction in Monitoring Period for	CPA 36	0 tCO2
Emission Reduction in Monitoring Period for	CPA 37	0 tCO2
Emission Reduction in Monitoring Period for	CPA 38	0 tCO2
Emission Reduction in Monitoring Period for	CPA 39	0 tCO2
Emission Reduction in Monitoring Period for	CPA 40	0 tCO2
Emission Reduction in Monitoring Period for	CPA 41	0 tCO2
Emission Reduction in Monitoring Period for	CPA 42	43,997 tCO2
Emission Reduction in Monitoring Period for	CPA 43	0 tCO2
Emission Reduction in Monitoring Period for	CPA 44	0 tCO2
Emission Reduction in Monitoring Period for	CPA 45	0 tCO2
Emission Reduction in Monitoring Period for	CPA 46	0 tCO2
Emission Reduction in Monitoring Period for	CPA 47	1,964 tCO2
Emission Reduction in Monitoring Period for	CPA 48	0 tCO2
Emission Reduction in Monitoring Period for	CPA 49	300,193 tCO2
Emission Reduction in Monitoring Period for	CPA 50	0 tCO2
Emission Reduction in Monitoring Period for	CPA 51	0 tCO2
Emission Reduction in Monitoring Period for	CPA 52	997,839 tCO2

Emission Reduction in Monitoring Period for	CPA 53	0 tCO2
Emission Reduction in Monitoring Period for	CPA 54	0 tCO2
Emission Reduction in Monitoring Period for	CPA 55	0 tCO2
Emission Reduction in Monitoring Period for	CPA 56	0 tCO2
Emission Reduction in Monitoring Period for	CPA 57	0 tCO2
Total Emission Reduction in monitoring period for	PoA	1,343,993 tCO2

A.2. Location of project activity

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The project activities in the 4 CPAs included in this monitoring report are in various location throughout the four countries of Nigeria, Malawi, Kenya and Madagascar.

a. Host Party(ies);

CPA 1 Republic of Madagascar
CPA 2 Republic of Madagascar
CPA 3 Republic of Madagascar
CPA 4 Republic of Madagascar
CPA 5 Republic of Madagascar
CPA 6 Republic of Madagascar
CPA 7 Republic of Madagascar
CPA 8 Republic of Madagascar
CPA 9 Republic of Madagascar
CPA 10 Republic of Madagascar
CPA 11 Republic of Madagascar
CPA 12 Republic of Madagascar
CPA 13 Republic of Madagascar
CPA 14 Republic of Madagascar
CPA 15 Republic of Madagascar
CPA 16 Republic of Madagascar
CPA 17 Republic of Madagascar
CPA 18 Republic of Madagascar
CPA 19 Republic of Madagascar
CPA 20 Republic of Madagascar
CPA 21 Republic of Madagascar
CPA 22 Republic of Madagascar
CPA 23 Republic of Madagascar
CPA 24 Federal Democratic Republic of Ethiopia
CPA 25 Federal Democratic Republic of Ethiopia
CPA 26 Federal Democratic Republic of Ethiopia
CPA 27 Republic of Kenya
CPA 28 Republic of Kenya
CPA 29 Republic of Kenya
CPA 30 Republic of Kenya
CPA 31 Republic of Kenya
CPA 32 Republic of Kenya

CPA 33 Republic of Kenya
CPA 34 Republic of Kenya
CPA 35 Republic of Malawi
CPA 36 Republic of Mozambique
CPA 37 Republic of Mozambique
CPA 38 Federal Republic of Nigeria
CPA 39 Federal Republic of Nigeria
CPA 40 Republic of Uganda
CPA 41 Republic of Zambia
CPA 42 Republic of Madagascar
CPA 43 Republic of Chad
CPA 44 Federal Democratic Republic of Ethiopia
CPA 45 Republic of Ghana
CPA 46 Ivory Coast
CPA 47 Republic of Kenya
CPA 48 Republic of Liberia
CPA 49 Republic of Malawi
CPA 50 Republic of Mozambique
CPA 51 Republic of Namibia
CPA 52 Federal Republic of Nigeria
CPA 53 Republic of Rwanda
CPA 54 Republic of Sierra Leone
CPA 55 Republic of Uganda
CPA 56 Republic of Zambia
CPA 57 Republic of Zimbabwe

b. Region/ State/ Province, etc.;

CPA 1 Ambohidratrimo District
CPA 2 Toamasina 1
CPA 3 District of Antananarivo Renivohitra
CPA 4 District of Ansirabe 1
CPA 5 District of Antsirabe 1
CPA 6 District of Betafo
CPA 7 District of Antanifotsy, Ambatolampy
CPA 8 District of Toamasina 2,Brickaville, Vatomandry,Mahanoro
CPA 9 District of Moramanga and Anosibe Anala
CPA 10 District of Fianarantsoa
CPA 11 District of Ambohimahasoa
CPA 12 Districts of Lalangina, Isandra, Vohibato, Ikalamavony
CPA 13 District of Antananarivo Avaradrano
CPA 14 District of Tsiroanomandidy
CPA 15 District of Miarinarivo
CPA 16 District of Manjakandriana
CPA 17 District of Anjozorobe
CPA 18 District of Antananarivo Atsimondrano

CPA 19	District of Antananarivo Renivohitra
CPA 20	District of Antananarivo Renivohitra
CPA 21	District of Antananarivo Renivohitra
CPA 22	District of Antananarivo Renivohitra
CPA 23	District of Antananarivo Renivohitra
CPA 24	Zone of Liben
CPA 25	District of GULELE
CPA 26	District of KOLFE KERANYO
CPA 27	District of LANGATA
CPA 28	County of Nakuru
CPA 29	County of KILIFI
CPA 30	County of KILIFI
CPA 31	Country of MOMBASA
CPA 32	Country of KWALE
CPA 33	Country of LAMU, TANA RIVER , TAITA TAVETA
CPA 34	Country of KISUMU
CPA 35	Lilongwe
CPA 36	District of Maputo
CPA 37	District of Maputo
CPA 38	State of Oyo
CPA 39	State of Delta
CPA 40	District of Wakiso
CPA 41	District of Lusaka
CPA 42	The CPA include all of Madagascar
CPA 43	The CPA include all of Chad
CPA 44	The CPA include all of Ethiopia
CPA 45	The CPA include all of Ghana
CPA 46	The CPA include all of Ivory Coast
CPA 47	The CPA include all of Kenya
CPA 48	The CPA include all of Liberia
CPA 49	The CPA include all of Malawi
CPA 50	The CPA include all of Mozambique
CPA 51	The CPA include all of Namibia
CPA 52	The CPA include all of Nigeria
CPA 53	The CPA include all of Rwanda
CPA 54	The CPA include all of Sierra Leone
CPA 55	The CPA include all of Uganda
CPA 56	The CPA include all of Zambia
CPA 57	The CPA include all of Zimbabwe

The specific location of each households included in each of the CPAs are registered

The location is recorded on the sales receipt (or user agreement) and documented in the sales record database (or stoves record database).

c. City/ Town/ Community, etc.;

CPA 1	Ambohidratrimo District
CPA 2	Communes of: Ambodimanga, Ankirihiry, FiraisanaAnjoma, Morarano and Tanambao V
CPA 3	Commune of Antananarivo Renivohitra 4
CPA 4	Commune of Antsirabe Renivohitra I
CPA 5	Commune of Antsirabe Renivohitra 2
CPA 6	Commune of Alakamisy Anativato
CPA 7	Communes of Ambohimandroso – Ambatolampy
CPA 8	Communes of Tamatave suburbaine, Andranomadio, Mahavelona, Ambodisaina, Ranomafana est, Mahanoro, Vatomandry
CPA 9	Commune of Andasibe - Beforona - Anjiro - Anosibe Ifody
CPA 10	Commune of Fianarantsoa Renivohitra
CPA 11	Commune of Ambohimahasoa
CPA 12	Commune of Andranovorivato - Talatan'ampano - Nasandratrony - Ambalakely
CPA 13	Commune of Ankadikely Ilafy
CPA 14	Commune of Tsiroanomandidy
CPA 15	Commune of Miarinarivo
CPA 16	Commune of Manjakandriana
CPA 17	Commune of Anjozorobe
CPA 18	Commune of Ampitatafika
CPA 19	Commune of Antananarivo Renivohitra 1
CPA 20	Commune of Antananarivo Renivohitra 2
CPA 21	Commune of Antananarivo Renivohitra 3
CPA 22	Commune of Antananarivo Renivohitra 5
CPA 23	Commune of Antananarivo Renivohitra 6
CPA 24	Zone of Liben
CPA 25	District of GULELE
CPA 26	District of KOLFE KERANYO
CPA 27	District of LANGATA
CPA 28	District of Naivasha
CPA 29	District of Ganze,Bahari,Kaloleni ,Rabai
CPA 30	Districts of Magarini , Malindi
CPA 31	Districts of Mvita,Likoni, Kisauni,Changamwe
CPA 32	Districts of Matuga, Kinango,Msabweni
CPA 33	Country of LAMU, TANA RIVER , TAITA TAVETA
CPA 34	Districts of Kisumu West, Kisumu Central, Kisumu East, Seme, Nyando, Muhoroni, Nyakach
CPA 35	Lilongwe
CPA 36	City of Maputo
CPA 37	Districts of Boane,Magude,Manhiça,Marracuene,Moamba,Namaacha,Matutuine
CPA 38	State of Oyo
CPA 39	State of Delta
CPA 40	District of Wakiso
CPA 41	District of Lusaka
CPA 42	Project activity is not limited to any city, Town or Community but include households throughout Madagascar
CPA 43	Project activity is not limited to any city, Town or Community but include

households throughout Chad

CPA 44	Project activity is not limited to any city, Town or Community but include households throughout Ethiopia
CPA 45	Project activity is not limited to any city, Town or Community but include households throughout Ghana
CPA 46	Project activity is not limited to any city, Town or Community but include households throughout Ivory Coast
CPA 47	Project activity is not limited to any city, Town or Community but include households throughout Kenya
CPA 48	Project activity is not limited to any city, Town or Community but include households throughout Liberia
CPA 49	Project activity is not limited to any city, Town or Community but include households throughout Malawi
CPA 50	Project activity is not limited to any city, Town or Community but include households throughout Mozambique
CPA 51	Project activity is not limited to any city, Town or Community but include households throughout Namibia
CPA 52	Project activity is not limited to any city, Town or Community but include households throughout Nigeria
CPA 53	Project activity is not limited to any city, Town or Community but include households throughout Rwanda
CPA 54	Project activity is not limited to any city, Town or Community but include households throughout Sierra Leona
CPA 55	Project activity is not limited to any city, Town or Community but include households throughout Uganda
CPA 56	Project activity is not limited to any city, Town or Community but include households throughout Zambia
CPA 57	Project activity is not limited to any city, Town or Community but include households throughout Zimbabwe

d. Physical/ Geographical location.

	Latitude	Longitude
CPA 2	-18.1602	49.4401
CPA 3	-18.8833	47.5167
CPA 4	-19.8608	47.025
CPA 5	-19.6182	47.1392
CPA 6	-19.8353	46.8489
CPA 7	-19.5237	47.4305
CPA 8	-17.6788	49.5116
CPA 9	-18.9513	48.4463
CPA 10	-19.8608	47.025
CPA 11	-21.1041	47.2091
CPA 12	-21.6297	46.9898
CPA 13	-18.8505	47.5658
CPA 14	-18.7684	46.1083
CPA 15	-18.7742	46.4566
CPA 16	-18.7879	47.2785
CPA 17	-18.3944	47.8794
CPA 18	-18.9375	47.4749
CPA 19	-18.7985	47.9121
CPA 20	-18.9263	47.5616

CPA 21	-18.8915	47.5169
CPA 22	-18.878	47.5222
CPA 23	-18.7918	47.5135
CPA 24	4.7555	40.5555
CPA 25	10.0167	38.7833
CPA 26	9.0141	38.7053
CPA 27	-1.3177	36.7833
CPA 28	-0.6812	36.9656
CPA 29	-3.8166	39.6166
CPA 30	-3.0166	40.1333
CPA 31	-4.0166	39.6666
CPA 32	-4.1666	39.4333
CPA 33	-3.3833	38.5666
CPA 34	-0.1111	34.7666
CPA 35	-13.9832	33.7833
CPA 36	-25.9652	32.5891
CPA 37	-25.5	32.3333
CPA 38	7.4068	3.8933
CPA 39	5.5	6
CPA 40	0.343	32.6634
CPA 41	-15.4166	28.2833
CPA 42	-18.642	46.6172
CPA 43	15	19
CPA 44	9.145	40.4896
CPA 45	7.9465	-1.0231
CPA 46	7.5399	5.547
CPA 47	-0.0235	37.9061
CPA 48	6.428	9.4294
CPA 49	-13.2543	34.3015
CPA 50	-18.6656	35.5295
CPA 51	-22.9576	18.4904
CPA 52	9.0819	8.6752
CPA 53	-1.9402	29.8738
CPA 54	8.4605	-11.7798
CPA 55	1.3733	32.2902
CPA 56	-13.1338	27.8493
CPA 57	-19.0154	29.1548

A.3. Parties and project participant(s)

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Norway	Green Development AS (private)	No
Kenya (host)	Green Development AS (private)	No
Madagascar (host)	Green Development AS (private)	No

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Malawi (host)	Green Development AS (private)	No
Mozambique (host)	Green Development AS (private)	No
Nigeria (host)	Green Development AS (private)	No
Uganda (host)	Green Development AS (private)	No
Zambia (host)	Green Development AS (private)	No
Chad (host)	Green Development AS (private)	No
Dominic Republic (host)	Green Development AS (private)	No
Ivory Coast (host)	Green Development AS (private)	No
Ethiopia (host)	Green Development AS (private)	No
Liberia (host)	Green Development AS (private)	No
Namibia (host)	Green Development AS (private)	No
Rwanda (host)	Green Development AS (private)	No
Sierra Leone (host)	Green Development AS (private)	No
Somalia (host)	Green Development AS (private)	No
Ghana (host)	Green Development AS (private)	No
South Africa (host)	Green Development AS (private)	No
Zimbabwe	Green Development AS (private)	No

A.4. Reference of applied methodology and standardized baseline

>>

AMS I.E., Sectoral Scope: 01, EB 60, title "Switch from non-renewable biomass for thermal application by the end user" (Version 04)

http://cdm.unfccc.int/methodologies/DB/I1DGDUD1D5J0KMLSZFWMD3W9Z47OZZ

a) Guidelines:

Guidelines on the demonstration of additionality of small-scale project activity. Version 09, EB 68, Annex 27.

"Guideline: Sampling and surveys for CDM project activities and programmes of activities" Version 03.0.

The sampling plan is done in accordance with CDM-EB67-A06-GUID

A.5. Crediting period of project activity

>>

7 years crediting period. 3 crediting periods. Total 21 years.

One single Monitoring Report is prepared for this monitoring period.

	Start Crediting Period	End Crediting Period	Crediting periods	length of crediting period
CPA 2	28/05/2014	27/05/2021	3	7 years

CPA 3	28/05/2014	27/05/2021	3	7 years
CPA 4	28/05/2014	27/05/2021	3	7 years
CPA 5	28/05/2014	27/05/2021	3	7 years
CPA 6	28/05/2014	27/05/2021	3	7 years
CPA 7	28/05/2014	27/05/2021	3	7 years
CPA 8	28/05/2014	27/05/2021	3	7 years
CPA 9	28/05/2014	27/05/2021	3	7 years
CPA 10	28/05/2014	27/05/2021	3	7 years
CPA 11	28/05/2014	27/05/2021	3	7 years
CPA 12	28/05/2014	27/05/2021	3	7 years
CPA 13	28/05/2014	27/05/2021	3	7 years
CPA 14	28/05/2014	27/05/2021	3	7 years
CPA 15	28/05/2014	27/05/2021	3	7 years
CPA 16	28/05/2014	27/05/2021	3	7 years
CPA 17	28/05/2014	27/05/2021	3	7 years
CPA 18	28/05/2014	27/05/2021	3	7 years
CPA 19	28/05/2014	27/05/2021	3	7 years
CPA 20	28/05/2014	27/05/2021	3	7 years
CPA 21	28/05/2014	27/05/2021	3	7 years
CPA 22	28/05/2014	27/05/2021	3	7 years
CPA 23	28/05/2014	27/05/2021	3	7 years
CPA 24	28/05/2014	27/05/2021	3	7 years
CPA 25	28/05/2014	27/05/2021	3	7 years
CPA 26	28/05/2014	27/05/2021	3	7 years
CPA 27	28/05/2014	27/05/2021	3	7 years
CPA 28	28/05/2014	27/05/2021	3	7 years
CPA 29	28/05/2014	27/05/2021	3	7 years
CPA 30	28/05/2014	27/05/2021	3	7 years
CPA 31	28/05/2014	27/05/2021	3	7 years
CPA 32	28/05/2014	27/05/2021	3	7 years
CPA 33	28/05/2014	27/05/2021	3	7 years
CPA 34	28/05/2014	27/05/2021	3	7 years
CPA 35	28/05/2014	27/05/2021	3	7 years
CPA 36	28/05/2014	27/05/2021	3	7 years
CPA 37	28/05/2014	27/05/2021	3	7 years
CPA 38	28/05/2014	27/05/2021	3	7 years
CPA 39	28/05/2014	27/05/2021	3	7 years
CPA 40	28/05/2014	27/05/2021	3	7 years
CPA 41	28/05/2014	27/05/2021	3	7 years
CPA 42	28/05/2014	27/05/2021	3	7 years
CPA 43	28/05/2014	27/05/2021	3	7 years
CPA 44	28/05/2014	27/05/2021	3	7 years
CPA 45	28/05/2014	27/05/2021	3	7 years
CPA 46	28/05/2014	27/05/2021	3	7 years
CPA 47	28/05/2014	27/05/2021	3	7 years
CPA 48	28/05/2014	27/05/2021	3	7 years
CPA 49	28/05/2014	27/05/2021	3	7 years
CPA 50	28/05/2014	27/05/2021	3	7 years
CPA 51	28/05/2014	27/05/2021	3	7 years

CPA 52	28/05/2014	27/05/2021	3	7 years
CPA 53	28/05/2014	27/05/2021	3	7 years
CPA 54	28/05/2014	27/05/2021	3	7 years
CPA 55	28/05/2014	27/05/2021	3	7 years
CPA 56	28/05/2014	27/05/2021	3	7 years
CPA 57	28/05/2014	27/05/2021	3	7 years

A.6. Contact information of responsible persons/ entities

>>

Name: Mr. Havard Norstebo
Phone: +254 705323314
E-mail: hn@greendevelopment.no
Title: General Manager, Green Development AS
CME responsible for the CDM PoA

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

>>

The implemented project activity includes the distribution of ethanol stoves and biogas stoves as well as distribution of water purification systems.

1. Implementation status
   A total of 57 CPAs has been registered as part of the PoA. No project activity resulting in emission reduction has been implemented in 53 of these CPAs due to the low price for CERs. Only 4 CPAs included in the PoA has implemented project activities that has resulted in verifiable emission reductions. The status of these 4 CPAs are as following:

   CPA 42. The project activity include solutions that provide purified water to household, solutions that provide biogas stoves to households and solutions that provide ethanol stoves to households. Most of the emission reductions are achieved by providing purified water to households through community based water purification systems that has been implemented throughout the CPA.

   CPA 47. The project activity has only started in very small scale and the project activities have been limited to providing biogas stoves to households and providing ethanol stoves to households.

   CPA 49. The project activity include solutions that provide purified water to household, solutions that provide biogas stoves to households and solutions that provide ethanol stoves to households. Most of the emission reductions are achieved by providing purified water to households through community based water purification systems that has been implemented throughout the CPA.

   CPA 53. Project activity is limited to providing purified water to households. This is provided by community based water purification systems that has been implemented in a number of communities. 53,842 households have been provided with purified water as a result of the project activity. This represent a large portion of the households included in the whole program and therefore a large portion of the emission reduction achieved by the program during the monitoring period.

2. The project activities are continuously expanding as the number of households provided with purified water, ethanol stoves and biogas stoves are continuously increasing as the

program activities are designed for gradual expansion. The project activities in CPA 52 has expanded the most, partly because the project activity in this CPA started much earlier than in the other CPAs in which project activities has started.

The CPAs are implemented in accordance with the provisions in the POA DD and the CPA DDs.

3. A single monitoring report is provided for the 56 CPAs of the 57 CPAs included in the PoA for the monitoring period. CPA 1 could not be included as we have not been able to change the start of the crediting period. CPA 1 will therefore be cancelled at a later stage. CPA 1 has no project activity implemented.

4. No request for changes to the PoA or to the project activities is pending board approval.

B.2. Post registration changes

B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

>>
None

B.2.2. Corrections

>>
None

B.2.3. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

>>
None

B.2.4. Changes to project design of registered project activity

>>
None

B.2.5. Changes to start date of crediting period

>>
None

B.2.6. Types of changes specific to afforestation or reforestation project activity

>>
None

SECTION C. Description of monitoring system

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The monitoring process includes monitoring of emission reduction in all CPAs registered as part of the PoA, in which emission reduction has been achieved. As project activity leading to emission reduction has only been achieved in 4 CPAs, the monitoring process has been limited to these 4 CPAs.

The monitoring system consist of 3 major parts;

1. Registration of Project Participating households.
2. Monitoring of emission reduction from a sample of project participating households.
3. Multiply the average emission reduction calculated from the monitoring in point 2 above, with the total number of registered Project participating households in point 1 above.

Part 1 - Registration of Project Participating Households

The registration of project participating households is done by the Local Project Implementation Partners. A contract is signed with each project participating household and the contract information is then submitted to the CME Data Management Department. The contract can be submitted in two formats:

1. By the use of a smart phone application. The registered data is then submitted automatically to the database of project participating households.
2. By a physical paper contract. The contract is then scanned and sent to the CDM Data Management Department. The CME Data Management Department will then register the relevant data from the contract in our database of project participating households

Whenever a households is registered in the database for project participating households, it is automatically given a Unique ID.

The registrations of households is done by the Local Project Implementation Partner.

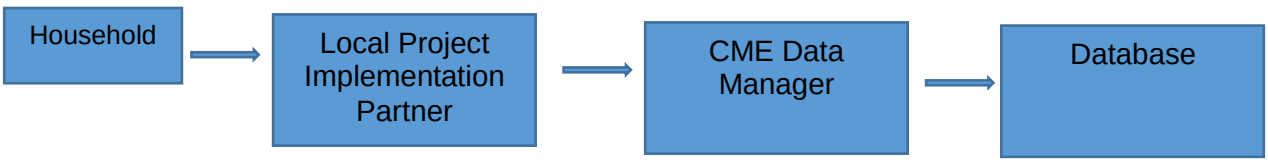
Illustration of two solutions for registering households in the database of project participating households

Data is registered in the database by the use of one of the following two solutions.

A. Illustration of registration of households with the use of smart phone application.

Registration is done by the Local Project Implementation Partner by the use of a smart phone application that the Local project Implementation Partner has installed in his or her smart phone.

B. Illustration of registration of households with the use of a paper contract.



The registration is done by the Local Project Implementation Partner with a paper contract. The paper contract is scanned and sent to CME Data Manager. The CME Data Manager register the data in the Database

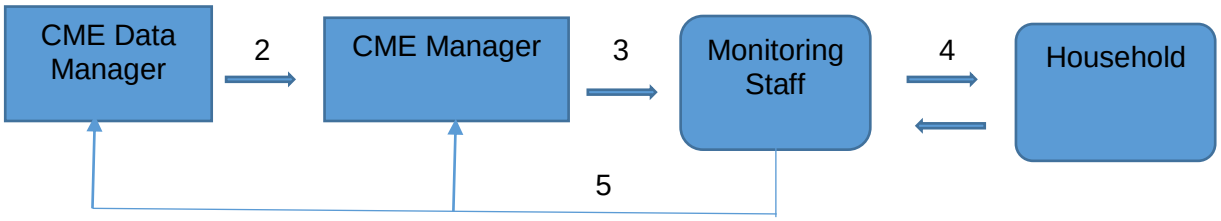
The data base of project participating households is continuously updated with new project participating households. The data is copied from this database into a spreadsheet as backup and to be able to document the households registered at various times, including at the time of selection of households to be monitored and at the time of the request for verification.

Part 2 - Monitoring of emission reduction from sample of project participating households

The monitoring of emission reduction from the sample of households are done according to the following process;

1. CME Manager decides on the time for monitoring is decided.
2. CME Data Manager select the sample of households to be monitored, and give this to the CME Manager
3. Monitoring staff is informed about which households they shall monitor
    a. The monitoring staff is provided training on how to conduct the monitoring process.
    b. The monitoring staff is provided with the monitoring forms, and the equipment needed to carry out the monitoring and the list of which household they shall monitor.
4. Monitoring staff visit the households selected for monitoring and carry out the monitoring process. The data collected from the monitoring process of each households is then registered in the monitoring form.
5. The monitoring staff send the monitoring form for each household monitored to CME Data Manager, with CC to CME Manager
6. CME Data Manager register all the data from the monitoring forms in the spreadsheet for calculation of emission reduction. See appendix 1 F.
7. CME Data Manager send the spreadsheet for calculating emission reduction to CME Manager. The CME Manager use data from this spreadsheet to calculate emission reduction from the project activities.

Illustration of Monitoring process step 2 to 5.



The households selected for monitoring where selected from all the 4 CPAs in which project activity had started at the time of selection of households.

Distribution of households monitored for emission reduction:

	Ethanol stoves	Biogas stoves	Purified Water	Total
CPA 42	22	22	22	**40**
CPA 47	20	20	20	**60**
CPA 49	43	43	43	**129**
CPA 57	0	0	22	**22**
Total	**85**	**85**	**85**	**255**

As the monitoring was done on PoA level and included all the CPAs in which emission reduction was claimed, the monitoring process and the tools used for monitoring where the same for all the households selected for monitoring. The monitoring process where therefore also the same for all CPAs which was monitored.

Part 3 - Multiply the average emission reduction calculated from the monitoring, with the total number of registered Project participating households

Emission reduction from the project activities for the period in which emission reduction is claimed is determined by multiplying the average emission reduction from each of the households monitored, with the total number of households registered in the database of project participating households at the time of request for monitoring.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

(Copy this table for each piece of data and parameter.)

Data / Parameter:	$f_{NRB,y}$
Unit:	Fraction
Description:	Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable biomass.
Source of data:	CPA 42 EB 67, annex 22 "Information note default values of fraction of nonrenewable biomass for least developed countries and small island developing states". CPA 47 http://cdm.unfccc.int/Panels/ssc_wg/meetings/037/ssc_37_an14.pdf (CDM SSC WG- Thirty-seventh meeting Report Annex 14) CPA 49 EB 67, annex 22, "Information note default values of fraction of nonrenewable biomass for least developed countries and small island developing states". CPA 52 http://cdm.unfccc.int/Panels/ssc_wg/meetings/037/ssc_37_an14.pdf (CDM SSC WG- Thirty-seventh meeting Report Annex 14)
Value(s) applied):	CPA 42 – 0.72 CPA 47 – 0.92 CPA 49 – 0.81 CPA 52 – 0.93
Purpose of data:	To calculate emission reductions.
Additional comment:	None

Data / Parameter:	$EF_{projected\_fossilfuel}$
Unit:	tCO_2/TJ
Description:	Emission factor for the substitution of non-renewable biomass that is substituted.
Source of data:	Default value in methodology. See section B.6.2 PoA DD
Value(s) applied):	81.6
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	$NCV_{biomass}$
Unit:	TJ/tonne
Description:	Net Calorific Value of the non-renewable biomass that is substituted.
Source of data:	Default value in methodology. See section B.6.2 PoA DD
Value(s) applied):	0.015
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	$NCV_{denatured\ alcohol}$
Unit:	TJ / m^3
Description:	Energy Content of denatured alcohol.
Source of data:	2006 IPCC Guidelines for National Greenhouse Gas inventories combined with default density of ethanol. See section B.6.2 PoA DD
Value(s) applied):	0.0213
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	NCV_{biogas}
Unit:	TJ/m^3
Description:	Energy content of the biogas.
Source of data:	IPCC default value. See Section B.6.2 PoA DD
Value(s) applied):	0.000215
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	$NCV_{Charcoal}$
Unit:	TJ/Tonne
Description:	Energy content of Charcoal.
Source of data:	IPCC default value. See Section B.6.2 PoA DD
Value(s) applied):	0.0295
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	η_{old}
Unit:	Fraction.
Description:	Efficiency of system being replaced.
Source of data:	Baseline survey. See section D.6.2 CPA DD
Value(s) applied):	CPA 42: 0.10 CPA 47: 0.10 CPA 49: 0.10 CPA 52: 0.1074
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	WB_{LB}
Unit:	Kg/litre
Description:	Mass of woody biomass that would have been required to boil one litre of water.
Source of data:	Laboratory test. See Section B.6.2 PoA DD
Value(s) applied):	0.4356
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	$WB_{LB,Charcoal}$
Unit:	Kg/litre
Description:	Mass of woody biomass that would have been required to boil one litre of water.
Source of data:	Laboratory test. See Section B.6.2 PoA DD
Value(s) applied):	0.2041
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	C_{CF}
Unit:	Number
Description:	Charcoal conversion factor.
Source of data:	CPA 42: "Diagnostic Du Secteur Energie a Madagascar" Ministry of Energy, june 2012. Page 21 CPA 47: Protecting and restoring forest carbon in tropical Africa, Chapter 6: Woodfuels and forests in tropical Africa CPA 49: Protecting and restoring forest carbon in tropical Africa, Chapter 6: Woodfuels and forests in tropical Africa CPA 52: Protecting and restoring forest carbon in tropical Africa, Chapter 6: Woodfuels and forests in tropical Africa
Value(s) applied):	CPA 42 - 12 CPA 47 - 10 CPA 49 - 10 CPA 52 - 10
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	C_P
Unit:	Fraction.
Description:	Portion of woody biomass that is used in the form of Charcoal in the project area.
Source of data:	Baseline survey. See Section D.6.2 CPA DD
Value(s) applied):	CPA 42 – 0.8200 CPA 47 – 0.8556 CPA 49 – 0.8153 CPA 52 – 0.6667
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	LF
Unit:	Fraction
Description:	Net to gross adjustment factor of 0.95 to account for leakage.
Source of data:	Default value in methodology. See section B.6.2 PoA DD
Value(s) applied):	0.95
Purpose of data:	Calculation of baseline emissions.
Additional comment:	None

Data / Parameter:	Thermal output of water purification systems
Unit:	kW
Description:	Thermal energy output from water purification system.
Source of data:	Community water purification system product description. See section B.6.2 PoA DD
Value(s) applied):	0.5
Purpose of data:	Calculate the CPA thermal output to ensure that it is within the 45 MW limit for small-scale projects.
Additional comment:	None

D.2. Data and parameters monitored

(Copy this table for each piece of data and parameter.)

Data / Parameter:	$ET_{stoves,\ units,y}$
Unit:	Number
Description:	Average number of ethanol stoves used by project participating households in year y.
Measured/ Calculated / Default:	Calculated
Source of data:	Random Sampling
Value(s) of monitored parameter:	0.33
Monitoring equipment:	Not Applicable
Measuring/ Reading/ Recording frequency:	Annually monitoring
Calculation method (if applicable):	The average number of ethanol stoves used is calculated by adding the ethanol stove used by the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	The number of households that use ethanol stoves in the project area has been cross checked with the sales records from the ethanol stove suppliers,
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$ET_{usage,y}$
Unit:	Litres
Description:	Average daily denatured alcohol usage by project participating households in year y.

Measured/ Calculated / Default:	Measured
Source of data:	Monitoring of random sample of project participating households.
Value(s) of monitored parameter:	0.28
Monitoring equipment:	Not applicable
Measuring/ Reading/ Recording frequency:	Measuring annually
Calculation method (if applicable):	The usage of denatured alcohol has been physically recorded in a representative number of households over a period of 7 days.
QA/QC procedures:	The denatured alcohol consumption is based on pure ethanol. Hence the denatured alcohol used by the household was measured to determine its purity. If the NCV of the denatured alcohol is below that of the default $NCV_{denaturedAlcohol}$ 0.013 TJ/m^3, then the ET usage shall be adjusted for the lower NCV of the denatured alcohol used. If the NCV of the denatured alcohol used is 10% lower than the default value for $NCV_{denaturedAlcohol}$ then the $ET_{usage,y}$ shall be reduced by 10% relative to the measured volume of denatured alcohol used. The purify of the denatured alcohol has been measured and registered by the representative sample of households monitored for $ET_{usage,y.}$
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The volume of ethanol was determined by multiplying the monitored usage, with the % of purity of the fuel. The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$ET_{stove, Capacity,y}$
Unit:	kW
Description:	Average thermal capacity of ethanol stove used by the project participating households.
Measured/ Calculated / Default:	Product description for each ethanol stove is has been used to determine its thermal capacity when this is available from stove suppliers. Alternatively, the thermal capacity of the stoves has been determined by a qualified laboratory.
Source of data:	Monitored data
Value(s) of monitored parameter:	0.60
Monitoring equipment:	Not applicable.
Measuring/ Reading/ Recording frequency:	Measuring annually
Calculation method (if applicable):	The average thermal capacity of ethanol stove used by the project participating household is calculated by adding the thermal capacity of the ethanol stoves used by the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	None
Purpose of data:	Calculate the CPA thermal output capacity to ensure that it is within the 45 MW limit for small-scale projects.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$ET_{stove,Efficiency,y}$
Unit:	Percentage
Description:	Average thermal efficiency of ethanol stove used by the project participating household.
Measured/ Calculated / Default:	Calculated
Source of data:	Monitoring of random sample of project participating households. The source of data for each type of stove is provided by the stove supplier or in absence of such information, the value is determined by a qualified laboratory.
Value(s) of monitored parameter:	18.42
Monitoring equipment:	Not applicable
Measuring/ Reading/ Recording frequency:	Monitored annually
Calculation method (if applicable):	The average ethanol stove efficiency is calculated by adding the ethanol stove efficiency of the ethanol stoves used by the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	None
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level. The value is calculated as an average of the values from each of the types of stoves used by the households monitored.

Data / Parameter:	$BG_{Stoves,\ units,y}$
Unit:	Number
Description:	Average number of biogas stoves used by project participating household in year y.
Measured/ Calculated / Default:	Calculated
Source of data:	Random Sampling
Value(s) of monitored parameter:	0.33
Monitoring equipment:	Not applicable
Measuring/ Reading/ Recording frequency:	Reading
Calculation method (if applicable):	The average number of biogas stoves used is calculated by adding the biogas stoves used by the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	Not applicable
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$BG_{usage,y}$
Unit:	m^3
Description:	Average daily biogas usage per project participating household in year y
Measured/ Calculated / Default:	Measured of random sample of project participating households.
Source of data:	Monitoring of random sample
Value(s) of monitored parameter:	0.19
Monitoring equipment:	Biogas meters. Flow meter(JBD1.6-SA) from Puxin Biogas
Measuring/ Reading/ Recording frequency:	Monitoring from a random sample of project participants.
Calculation method (if applicable):	The average biogas usage is calculated by adding the biogas usage of the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	Biogas meters will be calibrated annually.
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$BG_{stove, Capacity,y}$
Unit:	kW
Description:	Average thermal capacity of biogas stove used by the project participating households
Measured/ Calculated / Default:	Calculated
Source of data:	Measured of random sample of project participating households.
Value(s) of monitored parameter:	0.78
Monitoring equipment:	Not applicable.
Measuring/ Reading/ Recording frequency:	Measuring annually
Calculation method (if applicable):	The average biogas stove capacity is calculated by adding the biogas stove capacity of the biogas stoves used by the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	None
Purpose of data:	Calculate the CPA thermal output capacity to ensure that it is within the 45 MW limit for small-scale projects.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$BG_{stove,Efficiency,y}$
Unit:	Percentage
Description:	Average thermal efficiency of biogas stove used by the project participating households.

Measured/ Calculated / Default:	Calculated
Source of data:	Monitoring of random sample of project participating households.
Value(s) of monitored parameter:	18.10
Monitoring equipment:	Not applicable
Measuring/ Reading/ Recording frequency:	Monitored annually
Calculation method (if applicable):	The average biogas stove efficiency is calculated by adding the biogas stove efficiency of the biogas stoves used by the households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	None
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$N_{p,y}$
Unit:	Number
Description:	Average number of people in project participating households drinking purified water provided by the equipment supplied by the program.
Measured/ Calculated / Default:	Calculated
Source of data:	Monitoring of random sample of project participating households.
Value(s) of monitored parameter:	2.73
Monitoring equipment:	Not applicable
Measuring/ Reading/ Recording frequency:	Monitored annually
Calculation method (if applicable):	The average number of people in the households drinking purified water is calculated by adding the number of people in households drinking purified water and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	None
Purpose of data:	Calculation of baseline emissions.
Additional comment:	Some of the households monitored were found to have very many people. Households that had more than 14 people has been registered as having 14 people only. This is conservative. The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$QDW_{p,y}$
Unit:	Litre/Day
Description:	Average nr of litre of purified water used by each person in project participating households in year y.

Measured/ Calculated / Default:	Monitoring of random sample of project participating household. This was done according to the monitoring process. The households were monitored for one week, to determine the total consumption of purified water by the household, and this value was divided by the number of people in the household and by 7 in order to get the average daily consumption of purified water per person. In case of a community based water purification system is being used, a single end user contract might be signed for the whole community which get access to the purified water. Such a contract must state how many households that are included in the community, and then the annual monitoring might optionally monitor the daily distribution of the purified water from the community based water purification facility and divided this with the total number of number of people registered as receiving purified water from the community based water purification plant.
Source of data:	Monitoring of random sample of project participating households.
Value(s) of monitored parameter:	1.37
Monitoring equipment:	Water containers
Calculation method (if applicable):	The average drinking water consumption per for each person is calculated by adding the average water consumption per person for each households selected for monitoring, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	The value will be capped at 5.5, in accordance with the methodology.
Purpose of data:	Calculation of baseline emissions.
Additional comment:	The value of the parameter refers to the average value from the households monitored. The value therefore reflect the value at PoA level as the monitoring was done on PoA level.

Data / Parameter:	$W_{Quality,y}$
Unit:	Yes or No
Description:	Water Quality – to conform that purified water meet national or WHO interim microbiological standards for drinking water in year y.
Measured/ Calculated / Default:	Calculated
Source of data:	Monitoring of random sample of project participating households.
Value(s) of monitored parameter:	0.33
Monitoring equipment:	Petrifilm E-coli plates
Calculation method (if applicable):	The average water quality value is calculated by adding the values for the households that it is confirmed that receive purified water that meet the required water quality standard, and dividing this number with the number of households selected for monitoring.
QA/QC procedures:	To ensure compliance of the microbiological water quality either with: • The community microbiological water purification systems shall provide purified water that meet applicable national microbiological standards/guidelines or WHO‟s interim performance targets on households water treatment, and have energy output of less than 50 kW. • The Household microbiological water purification systems shall provide purified water that meet applicable national microbiological standards/guidelines or WHO‟s interim performance target on household water treatment
Purpose of data:	Calculation of baseline emissions.

Additional comment:	All the drinking water that was provided by the program was found to meet the required quality. As only 33% of the monitored households got purified water, only 33% of the households monitored where found to get purified water that met the required standards. For each household monitored, it was determined if the household did received purified water that met the required water qualify as a result of the project activity. Household that was found to receive water that met the required water qualify was they registered as "Yes". The value of "Yes" was then registered a "1" in the spreadsheet used to calculate emission reductions. All the households that where monitored, but found not to receive water that met the quality requirement was registered as "No". The value of "No" was then registered as "0" in the spreadsheet used to calculate emission reductions. The Petrifilm E-coli plates are portable and disposable systems for testing water quality. The systems cannot be re-used once it has been used to test a water sample. There is therefore not any form of calibration to be performed for this water purification test systems. WHO classifies a contamination of up to 100 E. coli CFU/ per 100 ml as intermediate risk. An E. coli CFU in 10ml count of less than 100 per100 ml can therefore be used as an indication that the drinking water is safe. See: Table 5.2 on page 78 of "Guidelines for drinking-water quality", second edition, Volume 3 "Surveillance and control of community supplies"

D.3. Implementation of sampling plan

>>
The sampling plan is done in accordance with CDM-EB67-A06-GUID
"Guideline: Sampling and surveys for CDM project activities and programmes of activities"
Version 03.0.

Simple random sampling was used in accordance to the above guideline and standard.

All the parameters monitored, met the required sample size needed to achieve confidence level of 95/10

The sampling plan was carried out in accordance to the detailed description provided in the CDM PoA DD.

This process included the following steps:

1. Select a time for sampling. Households were selected from the households at the time of the start of the monitoring period. The start of the monitoring period where 1st of August 2014
2. Quantity the number of project participating households that shall be subject to monitoring. It was estimated biogas was the monitored parameter that would have the greatest standard deviation in the monitored data, and that the required sample size for this parameter would be 85. As the sample size for each parameter sampled should be the same for each parameter to be monitored, the same sample size would be required for monitoring households using purified water and ethanol stoves.
3. Identify the households to be subject to monitoring accordingly. As it was expected that biogas consumption would have the greatest standard deviation of the monitored values, project participating households using biogas where initially selected for monitoring.
    a. A total of 255 project participating households were using biogas stoves at the time of the start of the monitoring period. 255 divided by 85 is 3, and hence every 3rd project participating household using biogas was selected for monitoring.

b. All the project participating households using biogas were therefore listed in accordance to their Unique ID number and every 3rd households on this list where selected for monitoring.
c. The same number, (85) of project participating households using ethanol stoves and purified water were selected based on being physically close to the households that used biogas for cooking and which had been selected for monitoring in accordance to point b above.

Table – Distribution of households selected for monitoring

	Project participating households using:			
	Biogas Stoves	Ethanol Stoves	Purified Water	Total
CPA 42	20	20	20	**60**
CPA 47	22	22	0	**44**
CPA 49	43	43	43	**129**
CPA 52	0	0	22	**22**
Total	**85**	**85**	**85**	**255**

As no project participating households where getting purified water as part of the project activity within CPA 52, it was decided that the 22 households that should have been selected from CPA 47 was rather selected from CPA 52, as no other households where selected for monitoring from this CPA 52, as CPA 52 did not have any households that used biogas for cooking as part of the project activity.

Required minimum sample size

The minimum required sample size where calculated in accordance with the CDM PoA DD and the CPA DDs. As the monitoring were done for a group of CPAs, the required confidence level should be 95/10. The formula to calculate the required sample size where:

$$n \geq \frac{1.96^2 NV}{(N-1)\,x\,0.1^2 + 1.96^2 V}$$

Where: $$V = \left(\frac{SD}{mean}\right)^2$$

n = Sample size – number of households needed to be included in sample.
N = Total number of households that can reply to a particular parameter
Mean = To be estimated or calculated prior to monitoring
SD = To be estimated or calculated prior to monitoring
1.96 = Represents the 95% confidence required
0.1 = represents the 10% relative precision

Table - Calculation of required sample size

Monitored households nr.	Sum monitored	Average value	Average monitored value	Standard Deviation	V-Value	Required sample size	Actual Sample size
Monitored values							
$ET_{stoves,units}$	85.00	0.33	1.00	0.00	0.000	0.0	85
$ET_{Usage\ (Liter\ pure\ denatured\ alcohol\ per\ day)}$	70.74	0.28	0.83	0.39	0.220	84.5	85
$BG_{Stoves,Units}$	85.00	0.33	1.00	0.11	0.012	4.5	85
BG_{usage} (m^3 per day)	48.55	0.19	0.57	0.24	0.171	65.8	85
$N_{p,y}$ (Number of people drinking purified water)	697.00	2.73	8.20	3.81	0.216	82.9	85
$QDW_{p,y}$ (Volume of water per person is drinking per day, in liter)	348.45	1.37	4.10	1.75	0.181	69.6	85
$BG_{stove,capacity}$	199.40	0.78	2.35	0.47	0.040	15.2	85
$ET_{stove,capacity}$	151.80	0.60	1.79	0.30	0.029	11.0	85
Thermal output water purification system (Kw)	42.50	0.17	0.50	0.00	0.000	0.0	85
$BG_{stove,efficiency}$ (% effiency)	4616.00	18.10	54.31	2.97	0.003	1.1	85
$ET_{stove,efficiency}$ (% effiency)	4696.00	18.42	55.25	4.02	0.005	2.0	85
$W_{quality}$	85.00	0.33	1.00	0.00	0.000	0.0	85

The data in the above table is from the spreadsheet for monitored data that has been submitted to DOE as supporting document to this monitoring report.

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

>>

Please note that the methodology AMS I.E version 4 does not provide specific equations for calculation of baseline emission or leakage, only for emission reductions. The emission reduction is calculated the following:

Emission reductions would be calculated as:

$$ER_y = ER_{y,Denatured\ alcohol} + ER_{y,Biogas} + ER_{y,Water}$$

Where

$$ER_{y,Denature\ alchol} = B_{y,Denatured\ alcohol} * f_{NRB,y} * NCV_{biomass} * EF_{projected\_fossilfuel}$$

$$ER_{y,Biogas} = B_{y,Biogas} * f_{NRB,y} * NCV_{biomass} * EF_{projected\_fossilfuel}$$

$$ER_{y,Water} = B_{y,Water} * f_{NRB,y} * NCV_{biomass} * EF_{projected\_fossilfuel}$$

ER_y	=	Emission reductions during the year y, in tCO_2e
B_y	=	Quantity of biomass that is substituted or displaced in tonnes
$f_{NRB,y}$	=	Fraction of biomass used in the absence of the project activity in year y, that can be established as non-renewable biomass.
$NCV_{biomass}$	=	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonnes)
$EF_{projected\_fossil\ fuel}$	=	Emission factor for the substitution on non-renewable biomass by similar consumers. Use a default value of 81.6 tCO_2/TJ

Step 1: By is determined:

By, must be calculated separately for the stoves (ethanol and biogas) and for the purified water consumed (drinking purified water from household water purification systems plus the purified water from the community water purification systems).

Hence B_y is the sum of $B_{y,biogas} + B_{y,Denatured\ alcohol} + B_{y,purifiedWater}$;

$B_{y,Biogas}$ = $(((HG_{p.y,Biogas} / (NCV_{biomass} * \eta_{old})) *(1-C_P)) + ((HG_{p.y,Biogas} / (NCV_{Charcoal} * \eta_{old})) * (C_P * C_{CF}))) * LF$

$B_{y,Denatured\ alchol}$ =

$(((HG_{p.y,Denatured\ alcohol} / (NCV_{Biomass} * \eta_{old})) *(1-C_P)) + ((HG_{p.y,Denatured\ alcohol} / (NCV_{Charcoal} * \eta_{old})) * (C_P * C_{CF}))) * LF$

$B_{y,PurifiedWater}$ = $(((N_{p,y} * QDW_{p,y} * WB_{LB} * 365 * 10^{-3}) * (1- C_P)) + ((N_{p,y} * QDW_{p,y} * WB_{LB,Charcoal} * 365 * 10^{-3}) * (C_P * C_{CF}))) * LF * W_{qualify,y}$

Where:

$B_{y,Biogas}$ = Quantity of woody biomass that is substituted or displaced in ton as a result of the biogas used by the project in year y.

$HG_{p,yBiogas}$ = Quantity of thermal energy generated by the biogas used the project participating households in year y measured in TJ.

$NCV_{Biomass}$ = Net Calorific Value of the non-renewable woody biomass that is

$NCV_{Charcoal}$ = substituted.
Net Calorific Value of the non-renewable woody biomass that is used in the form of charcoal and which is substituted.

η_{old} = Efficiency of the old stoves that has been replaced by the project.

$B_{yDenatured\ alcohol}$ = Quantity of woody biomass that is substituted or displaced in ton as a result of the denatured alcohol used by the project in year y.

$HG_{p,yDenatured\ alcohol}$ = Quantity of thermal energy generated by the denatured alcohol used by the project participating households in year y, measured in TJ.

$B_{y,PurifiedWater}$ = Quantity of woody biomass that is displaced in ton as a result of the purified water replacing the need to boil water.

$N_{p,y}$ = Total number of people in the project area that get purified water as a result of the project activity.

$QDW_{p,y}$ = Volume of drinking purified water in litres per person per day.

WB_{LB} = Mass of woody biomass that would have been required to boil one litre of water (kg/litre).

$WB_{LB,Charcoal}$ = Mass of woody biomass that is used in the form of charcoal that has been required to boil one litre of water (kg/litre).

C_{CF} = Charcoal Conversion Factor

C_P = Portion of woody biomass that is used in the form of charcoal in the project area.

LF = Net to gross adjustment factor of 0.95 to account for leakage.

$W_{quality,y}$ = Portion of purified water that meet WHO standards for drinking water in year y.

Step 2. $HG_{p,y}$ is determined

HG_{py} calculations;

$HG_{p,y,Biogas}$ = $NCV_{Biogas} * BG_{Usage,y} * BG_{Stoves,Units,y} * (BG_{stove,effiency} / 100) * 365$

$HG_{p,y,Denatured\ alcohol}$ $NCV_{Denatured\ alcohol} * ET_{Usage,y} / 1000 * ET_{Stoves,Units,y} * (ET_{stove,\ efficiency} / 100) * 365$

Where

$HG_{p,y}$ = Quantity of thermal energy generated by the new renewable energy technology in the project area in year y (TJ).

NCV_{Biogas} = Net Calorific Value of Biogas. Based on default value.

$BG_{Usage,y}$ = Average Biogas usage in m3 per day per in year y (multiplied by 365 to get annual consumption per user).

$BG_{Stoves,Units,y}$ = Biogas stoves in use in the project area in year y.
$NCV_{Denatured\ alcohol}$ = Net Calorific Value of denatured alcohol. Based on default value.
$ET_{Usage,y}$ = Average denatured alcohol usage per litre per household in year y. Divided by 1000 to get value in m^3.
$ET_{Stoves,Units,y}$ = Ethanol stoves in use in the project area in year y.

Step 3. Determine the average emission reduction from project participating households.

Emission reduction is calculated from the project participating households selected for annual monitoring. The total emission reduction from these households is divided by the number of households that has been subject to monitoring in order to determine the average emission reduction per project participating household.

The calculations of the emission from each of the 255 households monitored has been submitted to DOE as supporting document to this Monitoring Report.

Table of Emission Reduction of monitored households

Monitored Households	1	2	……	253	254	255	Total	Average
Emission Reduction	2.45	3.91	……	11.90	5.29	9.15	4,725.84	18.5327

Step 4 Adjust for average emission reduction for monitored households with adjustment factor

In case verification of more than one CPA is carried out at the same time, the DOE may consider the latest guidelines available from the CDM Executive Board (CDM EB) to carry out verification following a sampling approach. In such circumstances, the DOE would undertake a detailed verification (including site visits) for only a sample number of CPAs. The sample size will be calculated as per the sampling guidance issued by the CDM-EB. In case there are discrepancies between the emission reductions (ERs) reported in the monitoring report and the ERs verified by the DoE (on the basis of detailed review), for those sample CPAs that are subject to detailed review, or for those households that has been subject to detailed review, an adjustment factor (as described below) shall be worked out and the same shall be applied to adjust the ERs reported in the monitoring reports of the other CPAs, or for the other households, for which the DOE did not carry out a detailed review (including site visit). Request for issuance of CERs should be made for the adjusted ERs.

$ER_{i,adjusted} = ER_{i,reported} * F_{adj}$
$F_{adj} = (\sum ER_{j,verified} / \sum_{j,reported})$

Where,
$ER_{i,adjusted}$ = Adjusted ERs from CPA $_i$, which is not subject to detailed review.
$ER_{i,reported}$ = ERs reported in the monitoring report for CPA_i, which is not subject to detailed review.
$ER_{j,verified}$ = ERs verified by the DoE for CPA $_j$, which is subject to detailed review.
$ER_{j,reported}$ = ERs reported in the monitoring report of CPA $_j$, which is subject to detailed review.
i = Number of CPAs, which are not subject to detailed review.
J = Number of CPAs, which are subject to detailed review.

If there are no discrepancies between the emission reduction observed from the monitoring process and the emission reduction observed during site visit by DOE, then no adjustment shall be made for the average emission reduction mentioned in step 3 above.

Step 5. Determine total CPA emission reduction.

Total emission reduction from the CPA is determined by multiplying the average emission reduction per project participating households with the total number of project participating households at the time of the monitoring.

Table of Emission Reductions

CPA	Households	Average emission reduction from households monitored	Emission Reduction
CPA 2	0		0.00
CPA 3	0		0.00
CPA 4	0		0.00
CPA 5	0		0.00
CPA 6	0		0.00
CPA 7	0		0.00
CPA 8	0		0.00
CPA 9	0		0.00
CPA 10	0		0.00
CPA 11	0		0.00
CPA 12	0		0.00
CPA 13	0		0.00
CPA 14	0		0.00
CPA 15	0		0.00
CPA 16	0		0.00
CPA 17	0		0.00
CPA 18	0		0.00
CPA 19	0		0.00
CPA 20	0		0.00
CPA 21	0	18.5327	0.00
CPA 22	0		0.00
CPA 23	0		0.00
CPA 24	0		0.00
CPA 25	0		0.00
CPA 26	0		0.00
CPA 27	0		0.00
CPA 28	0		0.00
CPA 29	0		0.00
CPA 30	0		0.00
CPA 31	0		0.00
CPA 32	0		0.00
CPA 33	0		0.00
CPA 34	0		0.00
CPA 35	0		0.00
CPA 36	0		0.00
CPA 37	0		0.00
CPA 38	0		0.00
CPA 39	0		0.00
CPA 40	0		0.00

CPA 41	0	0.00
CPA 42	2,374	43,996.68
CPA 43	0	0.00
CPA 44	0	0.00
CPA 45	0	0.00
CPA 46	0	0.00
CPA 47	106	1,964.47
CPA 48	0	0.00
CPA 49	16,198	300,193.03
CPA 50	0	0.00
CPA 51	0	0.00
CPA 52	53,842	997,838.81
CPA 53	0	0.00
CPA 54	0	0.00
CPA 55	0	0.00
CPA 56	0	0.00
CPA 57	0	0.00
Total PoA	**72,520**	**1,343,992.99**

E.2. Calculation of project emissions or actual net GHG removals by sinks

>>
There is no project emission.

E.3. Calculation of leakage

>>
There is no leakage. A default value of 0.95 has been accounted for in accordance with the methodology and the CDM PoA DD. This equals to a default leakage of 5% of emission reduction.

E.4. Summary of calculation of emission reductions or net anthropogenic GHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO_2e)	Project emissions or actual net GHG removals by sinks (t CO_2e)	Leakage (t CO_2e)	Emission reductions or net anthropogenic GHG removals by sinks (t CO_2e)
Total	1,343,993 tCO2	0 tCO2	0 tCO2	1,343,993 tCO2

E.5. Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO_2e)	2,914,081 tCO2	1,343,993 tCO2

E.6. Remarks on difference from estimated value in registered PDD

>>
59 CPAs has been registered under this PoA.
Due to the challenging market conditions for CERs, the program had to reduce its ambition of expanding the program throughout the PoA, but rather limited project activities to 4 of the 59 CPAs. As a result the total number of CERs generating emission reductions in 2014 is much less than expected, but the volume of the emission reduction from the 4 CPAs that has been prioritized has been better than expected. This is primarily because the program has been able to provide renewable energy solutions to more households than expected at the time of registration of the CPAs.

Differences in emission reduction from each of the CPAs in which emission reduction has been achieved:

CPA 42
The number of project participating households was 2,374 at the end of the monitoring period, compared to a total of 12,000 households expected to be included in the CPA. Total emission reduction during the monitoring period is 31,651 tCO2, compared to an expected emission reduction of 50,187 tCO2 in 2014 according to the CPA DD.

CPA 47
The number of project participating households in the CPA was only 106 at the time of completion of the monitoring period. This is much less than the 12,000 households that are expected to be included in the CPA. The project activities has just started and are currently in a rapid expansion phase, so that the project should be more in line with expectation during the next monitoring period. Total emission reduction during the monitored period was 1,413 tCO2, while the total emission reduction in 2014 was expected to be 58,584 tCO2.

CPA 49
Total number of project participating households included in CPA 49 is 16,198, compared to 12,000 households that was expected to be included according to the CPA DD. The program managed to expand more than expected as the project activity mainly consist of community based water purification systems, which are faster to expand that the other solutions included in the program.

CPA 53
Project started on 11/11/2013. Crediting period started on 28/05/2014. As it was a long time from the project started until the crediting period started, the project was able to expand and include many household before the start of the crediting period.

Total emission during the monitoring period is 997,839 tCO2. Total emission reduction for 2014 was expected to be 47,411 tCO2.

The number of project participating households included in CPA 52 is 53,842. The expected number of project participating households to be included in the project activity according to the CPA DD was 12,000. The program managed to expand more than expected as the project activity mainly consist of community based water purification systems, which are faster to expand that the other solutions included in the program.

E.7. Actual emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Item	Actual values achieved up to 31 December 2012	Actual values achieved from 1 January 2013 onwards
Emission reductions or GHG removals by sinks (t CO_2e)	0 tCO2	1,343,993 tCO2

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Appendix 1. Contact information of project participants and responsible persons/ entities

Project participant and/or responsible person/ entity	☑ Project participant ☑ Responsible person/ entity for completing the CDM-MR-FORM
Organization name	Green Development AS
Street/P.O. Box	Wergelandsveien
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State/Region	Oslo
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Country	Norway
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Website	www.greendevelopment.no
Contact person	Havard Norstebo
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Last name	Norstebo
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Document information

Version	*Date*	*Description*
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from *F-CDM-MR* to *CDM-MR-FORM*; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.

Version	*Date*	*Description*
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net anthropogenic GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.

Decision Class: Regulatory
Document Type: Form
Business Function: Issuance
Keywords: monitoring report