



CPA VALIDATION REPORT

TITLE OF CPA
**DOMESTIC COOKING STOVES IN MAPUTO
(MOZAMBIQUE)**

TITLE OF POA TO WHICH CPA IS INCLUDED:
**DOMESTIC COOKING STOVES SUBSTITUTION
PROGRAMME IN MOZAMBIQUE**

REPORT No. 2014-9064/01

REVISION No. 02

DET NORSKE VERITAS



CPA VALIDATION REPORT

Date of first issue: 28 February 2014	ConCert Project No.: PRJC-496255-2013-CCS-ITA
Approved by: Michael Lehmann	Organisational unit: Accredited Climate Change Services
Client: CarbonSinkGroup s.r.l.	Client ref.: Stefano Vaglio

Summary:

Title of CPA: CPA No. 01: "Domestic Cooking Stoves in Maputo (Mozambique)"

Title of PoA: Domestic Cooking Stoves substitution programme in Mozambique

Country: Mozambique

Methodology: AMS.II.G

Version: 05.0

GHG reducing Measure/Technology: Improved cooking stoves

Sectoral scope(s): Energy demand

ER estimate of CPA: 28 404 tCO₂e per year (average)

Size ☐ Large Scale ☒ Small Scale

Validation Phases:

☒ Desk Review ☒ Follow up interviews

☒ Resolution of outstanding issues

Validation Status

☒ Corrective Actions Requested ☒ Clarifications Requested

☐ Submission for registration ☐ Rejected

In summary, it is DNV's opinion that the CPA "Domestic Cooking Stoves in Maputo (Mozambique)", as described in the CPA-DD, version 05 of 10 October May 2014, meets the eligibility criteria established in the PoA "Domestic Cooking Stoves substitution programme in Mozambique", as described in the PoA-DD, version 05 of 10 October 2014, meets relevant UNFCCC requirements for including CPAs in a PoA and correctly applies the baseline and monitoring methodology AMS.II.G, version 05.0. Hence, DNV requests the inclusion of the CPA "Domestic Cooking Stoves in Maputo (Mozambique)" in Mozambique to the PoA "Domestic Cooking Stoves substitution programme in Mozambique".

Report No.: 2014-9064/01	Subject Group: Environment	Indexing terms	
Report title: "Domestic Cooking Stoves in Maputo (Mozambique)" in Mozambique		Key words Climate Change Kyoto Protocol Validation Clean Development Mechanism	
Work carried out by: Francesca Feller		<input checked="" type="checkbox"/> No distribution without permission from the client or responsible organisational unit <input type="checkbox"/> free distribution within DNV after 3 years <input type="checkbox"/> Strictly confidential <input type="checkbox"/> Unrestricted distribution	
Work verified by: Krishnan Namboodiri			
Date of this revision: 14 October 2014	Rev. No.: 02	Number of pages: 9	

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Abbreviations

AVSI	Corrective Action Request
CAR	Corrective Action Request
CCT	Controlled Cooking Test
CDM	Clean Development Mechanism
CME	Coordinatin/Managing Entity
CPA-DD	CDM component project activity design document
CL	Clarification request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CPA	Component project activity
DNV	Det Norske Veritas
DNA	Designated National Authority
FAR	Forward Action Request
FAO	Food and Agriculture Organization
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
KPT	Kitchen Performance Test
LoA	Letter of approval
NGO	Non-governmental Organisation
MoC	Modalities of communication
ODA	Official Development Assistance
PCIA	Partnership for Clean Indoor Air
PoA	Programme of activities
PoA-DD	CDM programme of activities design document
PP	Project Participant
PS	Clean Development Mechanism Project Standard
SSC	Small scale project
tCO ₂ e	Tonnes of CO ₂ equivalents
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation and Verification Standard



1 EXECUTIVE SUMMARY – VALIDATION OPINION

DNV Climate Change Services AS (DNV) has performed a validation of the component project activity (CPA) “Domestic Cooking Stoves in Maputo (Mozambique) in Mozambique requesting to be included in the PoA “Domestic Cooking Stoves substitution programme in Mozambique”. The validation was performed on the basis of the eligibility criteria for including CPAs established in the PoA “Domestic Cooking Stoves substitution programme in Mozambique”, as described in the PoA-DD, version 05 of 10 October 2014, and relevant UNFCCC criteria for including CPAs to PoAs.

The review of the CPA design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

The CPA correctly applies the baseline and monitoring methodology AMS.II.G, version 05.0 “Energy Efficiency Measures in Thermal Applications of Non-renewable Biomass”.

The aim of the CPA is to improve energy efficiency by substituting inefficient traditional cooking stoves with more effective ones. As a result, the PoA results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the CPA is not a likely baseline scenario. Emission reductions attributable to the CPA are hence additional to any that would occur in the absence of the CPA.

The total emission reductions of the CPA are estimated to be on the average 28 404 tCO₂e per year over the selected 7 year renewable crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change. The monitoring plan provides for the monitoring of the CPA’s emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the CPA design, and it is DNV’s opinion that the project participants are able to implement the monitoring plan.

In summary, it is DNV’s opinion that the programme of activity “Domestic Cooking Stoves in Maputo (Mozambique) in Mozambique, as described in the CPA-DD, version 05 of 10 October May 2014, meets the eligibility criteria established in the PoA “Domestic Cooking Stoves substitution programme in Mozambique”, as described in the PoA-DD, version 05 of 10 October 2014, meets relevant UNFCCC requirements for including CPAs in a PoA and correctly applies the baseline and monitoring methodology AMS.II.G, version 05.0. Hence, DNV requests the inclusion of the CPA “Domestic Cooking Stoves in Maputo (Mozambique) in Mozambique to the PoA “Domestic Cooking Stoves substitution programme in Mozambique”.

Oslo, 14 October 2014

Francesca Feller
Validator
Oslo, Norway

Michael Lehmann
Director of Services and Technologies
DNV Climate Change Services AS



2 INTRODUCTION

CarbonSinkGroup s.r.l. has commissioned DNV Climate Change Services AS (DNV) to perform a validation of the proposed small-scale component project activity (CPA) “Domestic Cooking Stoves in Maputo (Mozambique) (hereafter called “CPA”) requesting to be included in the PoA “Domestic Cooking Stoves substitution programme in Mozambique”. This report summarises the findings of the validation of the CPA on the basis of the eligibility criteria for including CPAs established in the PoA “Domestic Cooking Stoves substitution programme in Mozambique”, as described in the PoA-DD, version 05 of 10 October 2014, and relevant UNFCCC criteria for including CPAs to PoAs.

2.1 Objective

The assessment of a CPA requesting to be included in a PoA shall ensure that all the requirements determined in the PoA are met.

The assessment was performed on the basis of the eligibility criteria established in the PoA and the UNFCCC criteria for including CPAs to programme of activities under the Clean Development Mechanism (CDM), as well as criteria given to provide for consistent project operations, monitoring and reporting according to AMS.II.G version 05.0.

2.2 Scope

The validation scope is defined as an independent and objective review by a Designated Operational Entity (DOE) of the specific CPA-DD to be included in the PoA. The DOE shall scrutinize the information in the CPA-DD to assess compliance with the eligibility criteria established by the PoA, to check correct application of AMS.II.G (version 05.0), to check compliance with documentation requirements for CPAs and to check compliance with relevant UNFCCC criteria for including CPAs to PoAs.

The validation is not meant to provide any consulting towards the programme participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the CPA design.



3 METHODOLOGY

The validation consisted of the following three phases:

- I document review
- II follow-up actions (e.g. on-site visit and telephone or email interviews)
- III the closing out of validation findings and the issuance of the final validation report and opinion

The following sections outline each step in more detail.

3.1 Document review

The following tables list the documentation that was reviewed during the validation.

3.1.1 Documentation provided by the project participants

- /1/ CarbonSinkGroup s.r.l.: *CDM-SSC-PoA-DD for project activity "Domestic Cooking Stoves substitution programme in Mozambique" in Mozambique*, Version 01 dated 17 January 2014 and version 05 dated 10 October 2014
- /2/ CarbonSinkGroup s.r.l.: *CDM-SSC-CPA-DD for CPA titled "CPA No. 01: "Domestic Cooking Stoves in Maputo (Mozambique)"*, Version 01 dated 17 January 2014 and version 05 dated 10 October May 2014
- /3/ CarbonSinkGroup s.r.l.: *Appendix 4 ex ante ER calculations*, Version 01, Date 17 January 2014 and version 04 dated 9 May 2014
- /4/ CarbonSinkGroup s.r.l.: *Contract for project management*, 30 December 2013
- /5/ AVSI: *Stakeholder meeting Centro maria Graiza Rizzo*, 12 September 2012
- /6/ AVSI: *Stakeholder meeting Centro comunitario Chamanculo*, 13 September 2012
- /7/ AVSI: *Stakeholder meeting neighbourhoods of Xipamanine*, 14 September 2012
- /8/ AVSI: *Stakeholder meeting Ascodecha Chamanculo*, 14 September 2012
- /9/ AVSI: *Minutes of Stakeholder meeting Centro maria Graiza Rizzo*, 12 September 2012
- /10/ AVSI: *Minutes of Stakeholder meeting Centro comunitario Chamanculo*, 13 September 2012
- /11/ AVSI: *Minutes of Stakeholder meeting neighbourhoods of Xipamanine*, 14 September 2012
- /12/ AVSI: *Minutes of Stakeholder meeting Ascodecha Chamanculo*, 14 September 2012
- /13/ Kityo Peter, 2004: *Productivity and utilisation of natural fuel wood resources. An evaluation of the current situation in some parts of Gaza province, Mozambique*. MSc thesis. Available at http://www.itc.nl/library/papers_2004/msc/nrm/peter_kityo.pdf
- /14/ Girard, P., 2011: *Charcoal production and use in Africa: what future?*, Unasylva 211, Vol. 53, 2002
- /15/ Perspectives GmbH: 2011. *Proposal for a New Standardised Baseline for Charcoal Project in the Clean Development Mechanism*. 2011
- /16/ Ellegård, Anders et al., 2001 *Charcoal potential in Southern Africa (CAPOSA). Final report for Mozambique*. Maputo, Mozambique; December 2001
- /17/ FAO: *Global Forest Resources Assessment 2010, Country Report Mozambique*, 2010
- /18/ Cooperação para o Desenvolvimento e Morada Humana: *Energy efficiency*



- improvement Project – domestic cooking stoves in Maputo, Mozambique, July 2012*
- /19/ Brouwer, R. and Falcão, M. P., 2004. *Wood fuel consumption in Maputo, Mozambique. Biomass and Bioenergy*, Volume 27, Issue 3, September 2004, Pages 233–245. Available at www.sciencedirect.com
- /20/ Colorado State University, *Emissions and performance report*, 14 January 2014
- /21/ Envirofit, *Confirmation of operational life*, 14 February 2014

3.1.2 Methodologies, tools and other guidance by the CDM Executive Board

- /22/ CDM Executive Board: *CDM Validation and Verification Standard*, version 07.0
- /23/ CDM Executive Board: *CDM Project Standard*, version 07.0
- /24/ CDM Executive Board: *CDM Project Cycle Procedure*, version 07.0
- /25/ CDM Executive Board: *Standard for the demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities*, version 03.0
- /26/ CDM Executive Board: *Standard for sampling and surveys for CDM project activities and programme of activities*, version 04.0
- /27/ CDM Executive Board: *Baseline and monitoring methodology AMS.II.G*, version 05.0
- ...

3.1.3 Documents used by DNV to validate / cross-check the information provided by the project participants

- /28/ UNFCCC: *CDM website*, available at <http://cdm.unfccc.int/> accessed February 2014

3.2 Follow-up actions

On 19-21 February 2014 DNV visited Maputo, Mozambique and performed interviews with PoA stakeholders.

	Date / Type of interview	Name / Organization	Topic
/29/	19-21 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Alessandro Galimberti, Fondazione AVSI	• PoA and CPA design, CPA implementation, management system
/30/	20 MMM 2012 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Helio Manhisse, Fondazione AVSI	• CPA implementation, management system, local stakeholder consultation
/31/	19-20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Domingos Francisco Macuacua Chissano, Khandlelo Reponsible	• Baseline, regulations, common practice



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/32/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Luisa Macario, Chief of area 59	• Baseline, regulations, common practice, local stakeholder consultation
/33/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Otilia S. Nguambe, Chief of area 136	• Baseline, regulations, common practice, local stakeholder consultation, behavioural change
/34/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Daniel Baptista, Chief of the Xipamanine area	• Baseline, regulations, common practice, local stakeholder consultation, behavioural change
/35/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Francisco M., local chief	• Baseline, regulations, common practice, local stakeholder consultation
/36/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Teresa Georgina, user of pilot stove	• Cookstove performance, savings compare to baseline stove.
/37/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Delfina F. Nguambe, user of pilot stove	• Cookstove performance, savings compare to baseline stove.
/38/	20 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Deolinda Faducina, user of pilot stove	• Cookstove performance, savings compare to baseline stove.
/39/	21 February 2014 <input checked="" type="checkbox"/> On-site <input type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	Rosa Celestina Benedito, DNA of Mozambique	• Letter of approval, regulation, baseline, additionality, sustainable development

3.3 Closing out of validation findings

The objective of this phase of the validation was to resolve any issues which needed be clarified prior to DNV's conclusion on the CPA's compliance with applicable PoA requirements and relevant UNFCCC criteria for including CPAs to PoAs. In order to ensure transparency a validation protocol was customised for the CPA. The protocol shows in a



transparent manner the criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CPA is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The different columns in these tables are described in the figure below. The completed validation protocol for the CPA “Domestic Cooking Stoves in Maputo (Mozambique)” is enclosed in Appendix A to this report.

Table 1 of the validation protocol documents the findings of the desk review of the CPA design documentation and follow-up interviews with CPA stakeholders. Any findings raised in Table 1 are listed in Table 2 of the protocol, and changes to the description of the CPA design as a result of these findings are addressed in Table 2. Table 1 thus may not reflect all aspects of the CPA as described in the final CPA-DD submitted for inclusion.

A corrective action request (CAR) is raised if one of the following occurs:

- (a) The project participants have made mistakes that will influence the ability of the CPA to achieve real, measurable additional emission reductions;
- (b) Applicable PoA and UNFCCC requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable requirements have been met.

A forward action request (FAR) is raised during validation to highlight issues related to CPA implementation that require review during the first verification of the CPA. FARs shall not relate to the requirements for inclusion of CPAs.

The validation identified 13 CARs, 6 CLs and no FARs. The CARs and CLs were satisfactorily addressed by the project participants by among other revising the PoA-DD (please refer to Table 2 in Appendix A for further details). In addition to the changes made to the CPA-DD as a result of the validation findings, the following changes to the CPA-DD (version 05 dated 10 October May 2014) were made compared to the version of the CPA-DD submitted for validation (version 01 dated 17 January 2014):

- The starting date of the CPA and its crediting period were modified as the result of the earlier availability of the stoves;



Validation Protocol Table 1: Requirement Checklist				
Checklist question	Reference	Means of verification (MoV)	Assessment by DNV	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the PoA should meet. The checklist is organised in different sections, following the logic of the CDM-SSC-PoA-DD	Gives reference to documents where the answer to the checklist question or item is found.	Means of verification (MoV) are document review (DR) , interview (I) or any other follow-up actions (e.g., on site visit and telephone or email interviews) and cross-checking (CC) with available information relating to projects or technologies similar to the proposed CDM PoA under validation.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with the checklist question so far.	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. A corrective action request (CAR) is raised when project participants have made mistakes, the CDM requirements have not been met or there is a risk that emission reductions cannot be monitored or calculated. A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. A forward action request (FAR) during validation is raised to highlight issues related to CPA implementation that require review during the first verification of the CPA.

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Corrective action and/or clarification requests	Ref. to checklist question in table 2	Response by project participants	Validation conclusion
The CARs and/or CLs raised in Table 2 are repeated here.	Reference to the checklist question number in Table 2 where the CAR or CL is explained.	The responses given by the project participants to address the CARs and/or CLs.	The validation team's assessment and final conclusions of the CARs and/or CLs.

Validation Protocol Table 3: Forward Action Requests		
Forward action request	Ref. to checklist question in table 2	Response by project participants
The FARs raised in Table 2 are repeated here.	Reference to the checklist question number in Table 2 where the FAR is explained.	Response by project participants on how forward action request will be addressed prior to first verification.

Figure 1: Validation protocol tables



3.4 Internal quality control

The validation report underwent a technical review performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3.5 Validation team

<i>Role</i>	<i>Last Name</i>	<i>First Name</i>	<i>Country</i>	<i>Type of involvement</i>						
				Desk review	Site visit / Interviews	Reporting	Supervision of work	Technical review	TA 3.2 competence	Financial expertise
Team leader (Validator)	Feller	Francesca	Italy	✓	✓	✓			✓	
Technical reviewer	Namboodiri	Krishnan	India						✓	

The qualification of each individual validation team member is detailed in Appendix B to this report.



4 VALIDATION FINDINGS

The CPA “Domestic Cooking Stoves in Maputo (Mozambique), as described in the CPA-DD, version 05 of 10 October May 2014:

- meets the eligibility criteria established in the PoA “Domestic Cooking Stoves substitution programme in Mozambique”, as described in the PoA-DD, version 05 of 10 October 2014;
- meets relevant UNFCCC requirements for including CPAs in a PoA; and
- correctly applies the baseline and monitoring methodology AMS.II.G, version 05.0.

Hence, the CPA meets the requirements for inclusion of the CPA “Domestic Cooking Stoves in Maputo (Mozambique) in Mozambique to the PoA “Domestic Cooking Stoves substitution programme in Mozambique”.

The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in detail in the validation protocol in Appendix A.

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APPENDIX A

PROTOCOL FOR ASSESSING COMPLIANCE OF SPECIFIC CPA WITH POA REQUIREMENTS

Table 1 Requirements checklist

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
A Description of CPA (PS § 31, VVS § 62-63, § 189)						
A.1. Title, Technical description of CPA and Parties involved						
A.1.1	Does section A.1 of the CPA-DD include a clearly identifiable CPA title, version number of the CPA-DD and date of the CPA-DD?	/1/	DR	<input checked="" type="checkbox"/> Clearly identifiable title of the CPA <input checked="" type="checkbox"/> Version number of the CPA-DD is included <input checked="" type="checkbox"/> Date of the CPA-DD is included.		OK
A.1.2	Is the CPA-DD is in accordance with the applicable requirements for completing CPA-DDs?	/1/ /28/	DR CC	The CPA-DD uses the most recent version of the CDM CPA-DD for small-scale project activities.		OK
A.1.3	Does the description of the CPA sufficiently cover all relevant elements, is accurate and does it provides the reader with a clear understanding of the nature of the proposed CPA?	/1/	DR	<p>The description of the CPA sufficiently covers all relevant elements, is accurate and provided the reader with a clear understanding of the nature of the proposed CPA.</p> <p>The evidence provided in support to the project description and referred to in the CPA-DD has been checked and found correct.</p>		OK
A.1.4	Does the CPA-DD provide information on the CPA implementer(s)? CPA implementers can be project participants of the PoA, under which the CPA is submitted, provided the name is included in the registered PoA.	/1/	DR	The project participant indicated in section A.6 of the CPA-DD correspond to the one indicated in the PoA-DD.		OK
A.1.5	Does the CPA-DD describe all the technologies and/or measures to be employed and/or implemented by the CPA including a list of the facilities, systems and equipment that will be installed and/or modified by the CPA	/1/	DR	The CPA-DD describes the technologies and/or measures to be employed by the CPA including the technical characteristics of the equipment that will be distributed by the CPA.		OK
A.1.6	Does the CPA-DD adequately list all Party(ies) and CPA	/1/	DR	The CPA-DD indicates the Party and CPA	CAR1	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
implementer(s) involved in the CPA and provide contact information in Appendix 1? Are all listed Party(ies) and CPA implementer(s) included in the PoA?		/29/	I	<p>implementers involved in the CPA and provides contact information in Appendix 1. The CPA implementer is Fondazione AVSI, which is also the CME of the PoA. The project participant indicated correspond to the one indicated in the PoA-DD.</p> <p>CAR1: The CPA-DD indicates CarbonSinkGroup s.r.l.; Cloros Srl; and MAN.SE.F. Onlus as “other implementers of the CPA”, but their contact details are not indicated in Appendix 1 of the CPA-DD. The PP is requested to ensure consistency in the information presented in section A.6 and Annex 1 of the PoA-DD, the Letters of Approval and the Modalities of Communication form.</p>		
A.1.7	Does the CPA-DD provide geographic reference or other means of identification that allows for the unique identification of the CPA?	/1/ /29/ /30/ /31/	DR I	<p>The CPA-DD includes a detailed description of the CPA location, which consists of the districts of Chamanculo C and Xipamanine in the city Maputo, Mozambique. the CPA-DD includes maps with the boundaries of the two districts. The baseline report submitted to DNV further confirms the location and geographical boundaries of the CPA.</p> <p>The project description was verified on site with the CME and stakeholders.</p>		OK
A.2. Duration of the CPA and crediting period						
A.2.1	Is the CPA starting date clearly defined and evidenced? Is the start date of the CPA the earliest date at which either the	/1/ /29/	DR I	The starting date of the CPA corresponds to the date when the first stoves are distributed to the	OK	

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
implementation or construction or real action of the CPA begins? Is the start date on or after the start date of the PoA?				families. This is forecasted to happen on 1 november 2014. The starting date of the CPA is after the starting date of the PoA, which was published for global stakeholder consultation on 22 January 2014.		
A.2.2	Is the CPA operational lifetime clearly defined and evidenced?	/1/	DR	The expected operational lifetime is 7 years and 00 months. CL1: The PP is requested to submit evidence for the stated operational time of the cookstoves.	CL1	OK
A.2.3	Has the crediting period been clearly defined and is the start of the crediting period deemed to be reasonable?	/1/	DR	The start date of the crediting period is 01 January 2015, or 2 months after the start date of the CPA if this is different from the one forecasted. The selected starting date ensures that the crediting period of the CPA will not start before the date of inclusion of the CPA in the PoA.		OK
A.2.4	Has it been confirmed that the length of the CPA crediting period does not exceed the end of PoA?	/1/	DR	Yes, it is confirmed that the length of the CPA crediting period does not exceed the end of PoA.		OK
A.3. Estimated amount of emission reductions from the CPA						
A.3.1	Has the emission reduction forecast been checked and is it deemed likely that the stated amount is achieved given that the underlying assumptions do not change?	/1/ /3/	DR CC	It has been estimated that the total emission reduction resulting from the implementation of the CPA will amount to 198 825 tCO ₂ , with annual average emission reductions of 28 404 tCO ₂ .		OK
A.4. Public funding						

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
A.4.1	In case public funding from Parties included in Annex I is used for the CPA, have these Parties provided an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties?	/1/ /4/ /29/	DR CC I	It is stated in the CPA-DD that no public funding is involved in the project finance. This can be confirmed by DNV who was shown the contract between the funding entity and the CME of the project for the implementation of CPA 1. Funding for other CPAs will be arranged when necessary. The situation was also confirmed by the CME.		OK
A.5. Confirmation for CPA						
A.5.1	Has a confirmation been provided that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA?	/1/ /28/	DR CC	The CME has checked that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA. This was done using information on the UNFCCC website.		OK
B Environmental impacts (PS § 63-64, VVS § 134-135) <i>It is assessed whether environmental impacts of the CPA have been properly addressed.</i>				<input checked="" type="checkbox"/> Analysis at PoA level <input type="checkbox"/> Analysis at CPA level This section must only be completed if the analysis of environmental impacts must be at CPA level.		
C Stakeholders' comments (PS § 65-69, VVS § 138-140) <i>It is assessed whether stakeholders have been properly consulted in the development of the CPA.</i>				<input type="checkbox"/> Consultation at PoA level <input checked="" type="checkbox"/> Consultation at CPA level This section must only be completed if the analysis of environmental impacts is at PoA level.		
C.1.	Have relevant stakeholders been consulted?	/1/ /9/ To	DR CC	The local stakeholders' meetings were conducted based on the principles of the Gold Standard to ensure the quality of the consultation		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
		/18/		<p>process.</p> <p>The PP has submitted participation lists which indicate that 4 stakeholder meeting were held respectively:</p> <ul style="list-style-type: none"> - on 12 September 2012 in Centro Maria Grazia Rizzo in Maputo; - on 12-13 September in Centro comunitario Chamanculo C, Maputo; - on 14 September 2012 in Xipamanine neighbourhood in Maputo; - on 14 September 2012 in Ascodecha Chamanculo C. <p>A total of 134 signatures are listed in the participation lists.</p>		
C.2.	Have appropriate media been used to invite comments by local stakeholders?	/1/ /29/ /30/ /31/	DR I	Stakeholders included national and local authorities, the local municipality, local leaders and users. The invitations were sent to to engage with as many stakeholders as possible, to promote acceptance of the project locally.		OK
C.3.	If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	/1/ /39/	DR I	<p>In September 2012 the PP enquired at the local DNA whether any requirements applied in terms of environmental impact assessment and local staholder consultation. The DNV indicated at the time that no requirements apply.</p> <p>This was confirmed by a representative of the DNA interviewed on 21 February 2014.</p>		OK
C.4.	Is a summary of the stakeholder comments received	/1/	DR	A summary of the stakeholder comments	CL2	OK

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Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
provided?		/9/ to /18/		received is included in the CPA-DD. CL2: The PP is requested to provide evidence of the comments received during the local stakeholders consultation. In addition to the scanned copies of the comments received during the local stakeholders consultation, DNV was observed a sample of hard copies of the comments received that are kept on site.		
C.5.	Has due account been taken of any stakeholder comments received?	/1/ /31/ /32/ /35/ /36/ /38/	DR I	The consultations with the stakeholders did not reveal any major problems, so it was not necessary to make specific changes to the project. This was also confirmed by all stakeholders interviewed on site.		OK
D Application of a baseline and monitoring methodology(ies)						
D.1. Title and reference of the approved baseline and monitoring methodology(ies) selected						
D.1.1.	Are the exact title and version of approved methodology(ies) and tools listed?	/1/	DR	The exact title and version of the methodology used is indicated in section D.1 of the CPA-DD: CAR2: Guidelines for sampling and surveys are missing	CAR2	OK

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			from section B.1 of the generic CPA-DD, while they are mentioned in the monitoring plan.		
D.2. Applicability of methodology (and tools) (VVS § 73-77) <i>The applicability of the methodology is checked through the eligibility criteria specifying the conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs</i>					
D.2.1. Do the eligibility criteria in D.5 below, in particular the eligibility criteria specifying the conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by the CPA, sufficiently demonstrate that the CPA complies with the applicability criteria of the applied methodology (and tools)? If not, provide below and assessment of the CPAs compliance with the applicability criteria.	/1/ /27/	DR CC	<p>The eligibility criteria in D.5 below, in particular the eligibility criteria specifying the conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by the CPA, sufficiently demonstrate that the CPA complies with the applicability criteria of the applied methodology (and tools).</p> <p>However for clarity the applicability of the methodology has been assessed here.</p>		OK
D.2.2. If not already sufficiently demonstrated through relevant eligibility criteria, how was it validated the CPA complies with the following applicability criteria: This category comprises efficiency improvements in thermal applications of non-renewable biomass. Examples of applicable technologies and measures include the introduction of high efficiency biomass fired cook stoves or ovens or dryers and/or energy efficiency improvements in existing biomass fired cook stoves or ovens or dryers	/1/ /27/	DR CC	The CPA is compatible with the scope of the methodology in that it consists of the introduction of high efficiency biomass fired cookstoves.		OK
D.2.3. If not already sufficiently demonstrated through relevant eligibility criteria, how was it validated the CPA complies with the following applicability criteria:	/1/ /13/ To	DR	The project participant has submitted evidence for the use of non-renewable biomass in the project area of the proposed PoA since 1989.	CAR3	OK

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Project participants shall be able to show that non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics insert applicability criteria	/18/		<p>The first piece of evidence submitted is a study on the productivity and utilization of natural fuel wood resources by Peter Kityo which focuses on the Gaza region of Mozambique. Since the Gaza province, together together with the Inhambane province, are the main firewood suppliers to the urban population of Maputo, the geographical scope of the evidence is considered acceptable. The study concludes that the current rate of harvesting wood resources for domestic fuel wood exceeds the production rate of the standing stock of wood resources in 50% of settlements surveyed and is not sustainable. Moreover, the same paper provides an overview of the deforestation trends in Mozambique, and citing existing literature on the topic indicates that “in 1987 a World bank report warned that national vegetation had been practically removed from a radius of between 50-60 km surrounding Maputo city”. “Further still, the author reported that the fuel wood production radius supplying Maputo city increased to 60-100 km. And after the local civil war in the late 90s that assured accessibility to rural areas, the same radius had increased to 100-200 km and lately as far as 600 km that is supported by a railway line”. The paper provides conclusive evidence that non-renewable biomass has been used in the project region since 31 December 1989.</p> <p>The second piece of evidence is a paper by P-Girard on charcoal production and use in Africa.</p>		

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>The article describes the trend towards increased use of charcoal in Africa, but does not demonstrate that non-renewable biomass has been used in the project region since 31 December 1989.</p> <p>The proposed standardized baseline authored by Perspectives GmbH indicates that relevant information concerning Mozambique has been sourced from a dissertation presented for a degree of Master of Science based on research carried out in the Sofala province of Mozambique. Moreover, it indicates an increase in the use of charcoal which may have led to localized deforestation. It does not provide information on the use of non-renewable biomass in the country since 1989.</p> <p>The 4th evidence submitted is a study authored by Ellegård et al, in 2001, which investigated the trends in deforestation and forest depletion in areas supplying three urban centres in Sub-Saharan Africa: Lusaka in Zambia, Dar es Salaam in Tanzania, and Maputo in Mozambique. The methods used in the project include remote sensing analysis, field surveys, participatory appraisals, computer modeling, scenario building and evaluation. The results show that around all three major cities, woodland cover has been reduced during the study period (1989-1998), partly due to charcoal production, partly due to increased cultivation. The paper provides conclusive evidence that</p>		

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>non-renewable biomass has been used in the project region since 31 December 1989.</p> <p>The last piece of evidence submitted is the country report for Mozambique extracted from FAO's Global forest Resources Assessment 2010. The report present changes occurring from 1990 to 2010 for a number of indicators, and is based on 2005 landsat TM images and the 2005 national forest inventory field data, as well as on an extensive literature review on forest plantation area in Mozambique between 1990 and 2005. The report estimates . Relevant information presented in the report are:</p> <ul style="list-style-type: none"> - Natural forest area over time is calculated based on a model that assumes a deforestation rate of 219 999 ha/y due to population pressure. Basen on this model, natural forest is calculated to decrease from 43 340 ha in 1990 to 38 960 ha in 2010; - Although planted forest increased from 38 000 ha in 1990 to 62 000 ha in 2010, forest area is indicated to decrease from 43 378 000 ha in 1990 to 39 022 000 ha in 2010; - The country's growing stock is estimated to have decreased from 1 574 608 000 ha in 1990 to 1 419 652 ha in 2010 for forest and from 298 376 000 ha to 286 950 000 ha for other wooded land; - The total above-ground biomass stock is 		

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			<p>calculated to have decreased from 2 993 to 2698 million metric tonnes oven-dry weight between 1990 and 2010 in forests, and between 1490 and 1435 million metric tonnes oven-dry weight in other wooded land;</p> <ul style="list-style-type: none"> - Wood removals have increased from 17 104 000 m³ to 19 233 m³ over-bark between 1990 and 2005; <p>The above data indicate a clear trend of unsustainable exploitation in the country at least since 31 December 1989.</p> <p>CAR3: Not all the evidence submitted in support to the use of non-renewable biomass since 31 December 1989 is considered acceptable. The PP is requested to look at the validation of each document and remove references to the documents that are not considered acceptable.</p>		
<p>D.2.4. If not already sufficiently demonstrated through relevant eligibility criteria, how was it validated the CPA complies with the following applicability criteria: The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input insert applicability criteria</p>	/1/ /3/	DR CC	<p>The PP demonstrates in the ER calculations submitted for CPA1 that the aggregate energy savings for a CPA are 147 GWh/y, therefore below the threshold indicated by the methodology.</p> <p>CAR4: The 4th applicability condition of the methodology listed in the PoA-DD is not found in the methodology. The PP is not requested to demonstrate compliance with this applicability condition.</p>	CAR4	OK

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D.3. Project boundary of CPA (VVS § 82-87)					
D.3.1. What is the CPA's system boundaries (components and facilities used to mitigate GHGs)? Are they clearly defined and in accordance with the methodology?	/1/ /27/	DR CC	The CPA-DD indicates that the project boundary consists of each individual improved cooking stove. The project boundary complies with the requirements of the methodology.		OK
D.3.2. Is the CPA located within the geographical boundary of the proposed or registered PoA?	/1/	DR	The CPA is located within the geographical boundary of the proposed PoA		OK
D.3.3. Which GHG sources are identified for the CPA? Does the identified boundary cover all possible sources linked to the CPA? Give reference to documents considered to arrive at this conclusion.	/1/ /27/	DR CC	The GHG sources identified for the CPA are CO ₂ from the combustion of non-renewable biomass for cooking both in the baseline and project scenario. Although the GHG gases to be included in the project boundary are not indicated by the methodology, the selected sources are reasonable based on the project design.		OK
D.3.4. Does the CPA involve other emissions sources not foreseen by the methodologies that may question the applicability of the methodology? Do these sources contribute with more than 1% of the estimated emission reductions of the CPA?	/1/ /27/	DR CC	The CPA does not involve other emissions sources not foreseen by the methodology that may question the applicability of the methodology		OK
D.4. Baseline scenario determination and description (VVS § 88-95 / Identification of alternatives to the project activity (VVS § 113-116) <i>Ensure that the evaluation of all alternatives provided and required by the methodology and also possible alternatives/offshoots of alternatives are discussed. If baseline alternatives required to be considered by the methodology are considered not applicable, please assess the justification for this</i>					
D.4.1. Which baseline scenarios have been identified? Is the list of baseline scenarios complete? Does the list include as one of the options that the CPA is undertaken without being	/1/ /27/	DR CC	The identified abselien scenario is that in absence of the project activity, the households of the project area would continue to use the		OK

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registered as a proposed CPA? Does the list contains all plausible alternatives which are viable means of supplying the comparable outputs or services that are to be supplied by the proposed CPA?			traditional inefficient cooking stoves. The baseline identified is compatible with the baseline scenario indicated by the methodology. The applied methodology does not require the identification and selection of baseline scenario among alternative scenarios, and instead indicates which baseline scenario applies to projects that meet its applicability criteria.		
D.4.2. Could the project activity in absence of the CDM or other baseline alternatives also be implemented by other entities than the CDM project participants? If so, has this also been included in the list of baseline scenarios?	/1/ /27/	DR CC	The applied methodology does not require the identification and selection of baseline scenario among alternative scenarios, and instead indicates which baseline scenario applies to projects that meet its applicability criteria.		OK
D.4.3. How have the other baseline scenarios been eliminated in order to determine the baseline?	/1/ /27/	DR CC	The applied methodology does not require the identification and selection of baseline scenario among alternative scenarios, and instead indicates which baseline scenario applies to projects that meet its applicability criteria.		OK
D.4.4. What is the baseline scenario?	/1/ /18/	DR CC	The identified abselien scenario is that in absence of the project activity, the households of the project area would continue to use the traditional inefficient cooking stoves. The specific nature and use of the traditional cooking stoves has been determined by a baseline study performed by a third party which investigated the type of cooking stoves used in the project area as well as the frequency of use. Since according to the authors of the baseline survey Chamanculo C and Xipemanine are two neighbouring settlements with similar features, the survey was carried out in the district of Chamanculo C which has a larger surface area and number of inhabitants. The similarity		OK

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			<p>between the two areas is also confirmed by DNV, which visited both during the site visit: the two areas are adjacent to each other, and no difference could be detected visually between the two.</p> <p>The study concluded that:</p> <ul style="list-style-type: none"> - The families living in 94.41% of Chamanculo's houses use coal stoves of which 36.69 % are single-mouth stoves and 57.73 % double-mouth stoves; - 70.39% of these families cook twice a day, 18.25% three times a day and 10.24 % once a day. 		
D.4.5. Is the determination of the baseline scenario in accordance with the guidance in the methodology?	/1/ /27/	DR CC	The determination of the baseline scenario is in accordance with the guidance in the methodology.		OK
D.4.6. Has the baseline scenario been determined using conservative assumptions where possible?	/1/ /36/ To /38/	DR I	<p>The baseline study was performed based on sampling. The sample size was calculated with the objective of obtaining a 4% error and 95% confidence. It can be concluded that the survey's design achieved an acceptably low degree of uncertainty. Moreover, the CME requested a local university to review the survey methodology and confirm whether it represented good practice and could be considered reliable. The university confirmed that the sampling framework applied represented good practice. Such confirmation was observed by DNV on site.</p> <p>Data collection started in August 2012 and ended in September 2012, however seasonal</p>		OK

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			variations are not expected: questions asked to users of the few stoves distributed as pilot (around 10 units) and and consulted during the site visit in February 2014 provided information on their baseline consumption that are in line with the study performed.		
D.4.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies? Does the baseline scenario comply with all applicable and enforced legislation?	/1/ /39/	DR I	The baseline scenario sufficiently takes into account relevant national and/or sectoral policies, and complies with all applicable and enforced legislation. This was confirmed by a representative of the local DNA.		OK
D.4.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	/1/ /18/	DR CC	The specific nature and use of the traditional cooking stoves has been determined by a baseline study performed by a third party which investigated the type of cooking stoves used in the project area as well as the frequency of use. This source is clearly indicated in the CPA-DD and is considered acceptable evidence which confirms the baseline scenario identified.		OK
D.4.9. Is the baseline determination adequately documented in the CPA-DD? <ul style="list-style-type: none"> • All assumptions and data used by the project participants are listed in the CPA-DD and related document to be submitted for registration. The data are properly referenced. • All documentation is relevant as well as correctly quoted and interpreted. • Assumptions and data can be deemed reasonable • Relevant national and/or sectoral policies and circumstances are considered and listed in the CPA-DD. • The methodology has been correctly applied to identify 	/1/	DR	CAR5: The description of the baseline scenario in the CPA-DD does not describe the findings of the baseline survey. Moreover, the section called "Determination of baseline Emissions" in D.4 logically belongs to section D.6.1.	CAR5	OK

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what would occurred in the absence of the proposed CPA						
D.5. Demonstration of eligibility for the CPA				The eligibility criteria for inclusion listed below reflect the final list presented in the PoA-DD version 05 dated 10 October 2014		
D.5.1.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The geographical boundary of the CPA is within the geographic boundaries of Mozambique;	/1/ /2/	DR	The CPA takes place in the city of Maputo, the capital of Mozambique.. This eligibility criterion is clearly met.		OK
D.5.2.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA ensures that double counting of emission reductions is avoided, through the identification of each stove with a unique identification number.	/1/	DR	DNV was provided with an improved cook stove of the brand and model that will be distributed. DNV could see the stove presents a unique serial number. This eligibility criterion is therefore met.		OK
D.5.3.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA involves the distribution/installation of new efficient cook stoves with following characteristics: <ul style="list-style-type: none"> specified efficiency of at least 20% biomass fired (for example charcoal or firewood) stove technology based on combustion or gasification single pot or multi pot portable or fixed unit size (height x width x depth) between 10 x 15 x 15 cm and 100 x 100 x 100 cm 	/1/	DR	DNV was provided with an improved cook stove of the brand and model that will be distributed. DNV could see the stove is designed to burn biomass by combustion, is designed for a single pot, is portable, and is within the size limits set at PoA level. Moreover, the stove has been tested to determine its efficiency by the Colorado State University, which establish it has an efficiency of 42.3%. This eligibility criterion is therefore met.		OK
D.5.4.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The start date of the CPA is not be prior of the start date of the PoA, 22nd of January 2014. The start date will be proofed by documentary evidence like the receipts of the selling the stoves in project area;	/1/	DR	The starting date of the PoA is 22 Janaury 2014, which coincides with the publication of the PoA-DD for GSC. DNV can confirm that at the time of the site visit, i.e. February 2014, the distribution of the improved stoves had not yet started. This eligibility criterion is therefore met.		OK

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D.5.5. Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA uses the version 06.0 of the small scale approved methodology AMS.II.G: Energy Efficiency Measures in Thermal Applications of Non-renewable Biomass. The fulfilling of applicability conditions of the methodology is demonstrated;	/1/	DR	The CPA uses the version 05.0 of the small scale approved methodology AMS.II.G: Energy Efficiency Measures in Thermal Applications of Non-renewable Biomass. The CPA-DD demonstrates the methodology is applicable to the project activity. The demonstration has been validated by DNV and is detailed in section D.2 of this checklist. This eligibility criterion is therefore met.		OK
D.5.6. Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA demonstrates its additionality by demonstrating that its “Project activities area solely composed of isolated units where the users of the technology/ measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the small-scale CDM thresholds” in accordance with EB 68, Annex 27;	/1/ /2/ /3/	DR	The PP has submitted calculations showing that the size of each unit is no larger than 5% of the small-scale CDM thresholds” in accordance with EB 68, Annex 27 The stoves will be distributed to households or communities or Small and Medium Enterprises (SMEs). This eligibility criterion is therefore met.		OK
D.5.7. Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA includes a description and documentation about local stakeholder consultation made in accordance with Clean development mechanism project standard (Version 05.0), and environmental impact analysis in the case required by the host country;	/1/ /9/ to /12/ /9/ to /18/	DR	The CPA includes a description of the local stakeholder consultation carried out in accordance with Clean development mechanism project standard (Version 05.0), and has submitted supporting documentation – validated in section C of this checklist. DNV received confirmation that Mozambique currently does not request a formal environmental impact analysis for this type of project. This eligibility criterion is therefore met.		OK
D.5.8. Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA includes affirmation if public funding is or is not involved in the project finance. In case public funding is	/1/	DR	The CPA includes affirmation if public funding is not part of the project financing. DNV has not come across any information that contradicts such statement. This eligibility criterion is		OK

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included, the Annex 1 country affirms that it doesn't result in a diversion of Official Development Assistance;				therefore met.		
D.5.9.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The target group of the CPA are the households or communities or Small and Medium Enterprises (SMEs) cooking with traditional stoves;	/1/	DR	The stoves will be distributed to households or communities or Small and Medium Enterprises (SMEs). This eligibility criterion is therefore met.		OK
D.5.10.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA follows the sampling requirements specified Standard for sampling and surveys for CDM project activities and programmes of activities (Version 04.1);	/1/	DR	The CPA follows the sampling plan requirements specified Standard for sampling and surveys for CDM project activities and programmes of activities (Version 04.1). The sampling plan has been validated in more detail in the section dealing with the monitoring plan further down in this checklist.		OK
D.5.11.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA adheres to the small-scale threshold criteria and remains within that threshold throughout the crediting period;	/1/ /3/	DR	The PP has submitted calculations showing that the small-scale CDM thresholds is reached with 12 284 units. The PP intends to distribute a maximum of 10 000 units per CPA to ensure compliance with this criterion. This eligibility criterion is therefore met.		OK
D.5.12.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? The CPA is not a de-bundled component of another CDM activity or PoA. The requirements for a debundling check as outlined in the version 03 of the "Guidelines on assessment of debundling for SSC project activities" are met;	/1/	DR	The PP has submitted calculations showing that the size of each unit is no larger than 1% of the small-scale CDM thresholds" in accordance with EB 68, Annex 27. This is sufficient evidence to confirm that the CPA is not required to perform a debundling check. This eligibility criterion is therefore met.		OK
D.5.13.	Has it been sufficiently justified that the CPA complies with the following eligibility criteria? End users receiving efficient stoves under the CPA	/1/	DR	End users will enter into an agreement transferring rights to the CERs generated by CPA in return for the for the subsidized		OK

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contractually cede their rights to claim and own emission reductions.			improved stove and its on-going maintenance over a lifetime of the CPA. This eligibility criterion is therefore met.		
D.6. Algorithms and/or formulae used to determine emission reductions of the CPA (VVS § 96-100)					
Data and parameters that are available at validation and that are not monitored					
D.6.1. How was parameter B _{old} - quantity of woody biomass used in the absence of the project activity in tonnes verified?	/1/ /21/ /3/	DR CC	<p>According to the CPA-DD, the quantity of woody biomass used in the absence of the project activity in tonnes per device has been sourced from the baseline survey.</p> <p>In fact, the baseline survey indicates that an average household in the project area uses 675 Meticals (equivalent 0.03 USD) to buy charcoal in a month, which corresponds to around 80 kg of charcoal per month, and 2.7 kg/households/day.</p> <p>CAR6: The baseline study indicates an average cost of 672.19 Meticais per month, not 675 as indicated in the CPA-DD.</p> <p>CL3: The PP is requested to submit evidence for the conversion from the cost of charcoal per month to the kg of charcoal per month.</p> <p>The survey indicated the average monthly expenses per family for charcoal. The cost was</p>	CAR6 CL3 CL4 CAR7 CAR8 CL5	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>then converted to weight by weighting the charcoal at the premises of local charcoal vendors in the same period that the survey was carried out. This calculation thus yielded the weight of average monthly charcoal used by each family.</p> <p>The average woody biomass needed for production 1 kg of charcoal is assumed to be 7.41 kilograms.</p> <p>CL4: The PP is requested to clarify if the use of different fuels is foreseen, and in this case how the diversity is managed in the calculation of emission reductions, in particular with respect to conversion factors.</p> <p>CAR7: The paper by Brouwer submitted as supporting evidence indicates a value of 7.14 kg, not 7.41 as indicated in the CPA-DD.</p> <p>CAR8: According to the methodology the unit of measure of parameter Bold is “per device”. The PoA-DD and ex-ante calculations submitted indicate this parameter is currently expressed “per household”. The PP is requested to comply with the applied methodology in the calculation of baseline biomass consumption per device. Moreover, the PP is requested to ensure the</p>		

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			<p>monitoring plan, and more specifically the calculation of the sample size is expressed in a consistent manner, since it is foreseen that most households will receive two devices.</p> <p>CL5: The PP is requested to explain how the ex-post ER calculations will account for households where a two-fires baseline stove is replaced by one improved cook stove, and cases where a one-fire baseline stove is replaced by two (or more) improved cookstoves.</p>		
D.6.2. How was parameter η_{old} - efficiency of the system being replaced verified?	/1/ /27/	DR CC	A default value of 0.10 has been selected. This is in line with the indications of the methodology and of the generic CPA, which indicated that such value can be used if the baseline charcoal stoves are unimproved models without an improved combustion air supply or flue gas ventilation system. From the pictures showing in the baseline survey carried out by a third party, it appears that the most common cooking stoves have these characteristics. The use of the 10% default value is therefore considered acceptable.		OK
D.6.3. How was parameter $f_{NRB,y}$ - fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass verified?	/1/ /27/	DR CC	<p>CAR9: According to the methodology, the fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass is a parameter that needs to be monitored. The project participant is requested to comply with this requirement.</p> <p>A value of 0.91 has been selected, corresponding</p>	CAR9	OK

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			to Mozambique's specific default value for this parameter. The use of the 91% default value is in line with the indications of the generic CPA, and is therefore considered acceptable.		
D.6.4. How was parameter NCV_{biomass} - net calorific value of the non-renewable woody biomass that is substituted verified?	/1/ /27/	DR CC	A value of 0.015 TJ/t has been selected, corresponding to the default value provided by the methodology. The use of this default value is in line with the indications of the generic CPA, and is therefore considered acceptable.		OK
D.6.5. How was parameter $EF_{\text{projected_fossilfuel}}$ - Emission factor for the substitution of non-renewable woody biomass by similar consumers verified?	/1/ /27/	DR CC	A value of 81.6 tCO ₂ /TJ has been selected, corresponding to the default value provided by the methodology. The use of this default value is in line with the indications of the generic CPA, and is therefore considered acceptable.		OK
D.6.6. How was parameter LAF - Leakage adjustment factor to account for leakages verified?	/1/ /27/	DR CC	A value of 0.95 has been selected, corresponding to the default value provided by the methodology. The use of this default value is in line with the indications of the generic CPA, and is therefore considered acceptable.		OK
D.6.7. In case any of the parameters above were determined based on sampling, was the sample adequate and did it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, did it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?	/1/ /27/	DR CC	The baseline study was performed based on sampling. The sample size was calculated with the objective of obtaining a 4% error and 95% confidence. It can be concluded that the survey's design achieved an acceptably low degree of uncertainty.		OK
Baseline emissions					
D.6.8. Are the calculations documented according to the approved methodology and tool and in a complete and transparent manner?	/1/ /27/ /21/	DR CC	The methodology does not require the calculation of baseline emissions separately, but relies on the calculation of emission reductions. Emission reductions are calculated using		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>equation 1 of the methodology. For the purpose of the ex-ante estimation of emission reductions, the PP has selected option 2 to determine the quantity of woody biomass that is saved in tonnes per device, and applies equation 3 which uses the quantity of woody biomass used in the absence of the project activity in tonnes per device, and the difference in efficiency between the baseline and project cooking stoves. Ex-post calculations will however be based on the results of a Kitchen Performance test.</p> <p>The quantity of woody biomass used in the absence of the project activity (B_{old}) is calculated as the product of the number of systems multiplied by the estimated average annual consumption of woody biomass per appliance (tonnes/year), derived from the baseline study.</p> <p>The efficiency of the baseline systems being replaced (η_{old}) is fixed ex-ante using the default value provided by the methodology.</p> <p>The efficiency of the systems being deployed ($\eta_{new,y}$) will be measured ex-post through a Water-Boiling-Test (WBT) protocol. For the <i>ex-ante</i> estimations $\eta_{new,y}$ is determined based on a test conducted by the University of Colorado, who determined an efficiency of 42.3%.</p> <p>For all remaining parameters in equation 1 of the methodology, the default values provided by the</p>		

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			methodology are applied. The calculation of emission reductions described and performed by the CPA are in line with the indication of the generic CPA-DD.		
D.6.9. Have conservative assumptions been used when calculating the baseline emissions?	/1/	DR	The assumptions made concern the choice of input parameters, which have been individually assessed in the sections above.		OK
D.6.10. Are uncertainties in the baseline emission estimates properly addressed?	/1/	DR	Beside the default values indicated by the methodology, the only parameters that are liable to uncertainty are B_{old} , η_{new} , and the estimated distribution rate of the cooking stoves. <ul style="list-style-type: none"> - B_{old}: see CARs and CLs above; - η_{new}: This parameter will only be used for the ex-ante estimation of ER, and will not be the basis for issuance. The source used for the ex-ante estimation of this parameter (the manufacturer's specifications) is considered sufficiently reliable for this purpose; - N_y: the distribution plan is the one foreseen by the project participant, and is considered acceptable. 		OK
D.6.11. If the calculations of baseline emissions are based on sampling, does this comply with the Standard for sampling and surveys?	/1/ /18/	DR CC	The calculation of baseline emissions is based on the results of the baseline survey, which is in turn based on sampling. The sample size for the baseline survey has been determined in order to achieve a precision of 4% and a confidence of 95%. This is in compliance with the requirementst of the CDM Standard for sampling and surveys.		OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
Project emissions					
D.6.12. Are the calculations documented according to the approved methodology and tool and in a complete and transparent manner?	/1/ /3/	DR CC	The methodology does not require the calculation of project emissions separately, but relies on the calculation of emission reductions. The calculation of emission reductions is discussed under the “baseline emissions” section above.		OK
D.6.13. Have conservative assumptions been used when calculating the project emissions?	/1/	DR	This is discussed under the “baseline emissions” section above.		OK
D.6.14. Are uncertainties in the project emission estimates properly addressed?	/1/	DR	This is discussed under the “baseline emissions” section above.		OK
D.6.15. If the calculations of project emissions are based on sampling, does this comply with the Standard for sampling and surveys?	/1/	DR	This is discussed under the “baseline emissions” section above.		OK
Leakage					
D.6.16. Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	/1/ /3/ /27/	DR CC	According to the methodology, leakage emissions don’t need to be quantified if a leakage adjustment factor of 95% is applied to the ER calculations. This option has been adopted by the project participant.		OK
D.6.17. Have conservative assumptions been used when calculating the leakage emissions?	/1/ /27/	DR CC	Yes, the project applies a leakage adjustment factor of 95% in accordance with the indications of the methodology.		OK
D.6.18. Are uncertainties in the leakage emission estimates properly addressed?	/1/ /27/	DR CC	By using a default value, uncertainties are addressed in accordance with the methodology.		OK
D.6.19. If the calculations of leakage emissions are based on sampling, does this comply with the Standard for sampling and surveys	/1/ /27/	DR CC	The calculation of leakage emissions is not based on sampling.		OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
Emission Reductions					
D.6.20. Algorithms and/or formulae used to determine emission reductions: <ul style="list-style-type: none"> All assumptions and data used by the project participants are listed in the CPA-DD and related document submitted for registration. The data are properly referenced All documentation is correctly quoted and interpreted. All values used can be deemed reasonable in the context of the CPA The methodology has been correctly applied to calculate the emission reductions and this can be replicated by the data provided in the PoA-DD and supporting files to be submitted for registration. 	/1/	DR	A conclusion on the calculation of emission reductions will be reached once relevant CAR and CL have been closed.		OK
D.7. Monitoring plan (VVS § 131-133)					
Data and parameters monitored					
D.7.1. Do the means of monitoring described in the plan comply with the requirements of the methodology?	/1/	DR	See CAR9	CAR9	OK
D.7.2. Does the monitoring plan contains all necessary parameters, and are they clearly described?	/1/ /27/	DR CC	CAR10: The name of parameter N _y is not consistent with the name indicated in the methodology. CAR11: Parameter “t” included in the monitoring plan is not required by the methodology. See CAR9.	CAR10 CAR11 CAR9	OK
D.7.3. In case parameters are measured, is the measurement equipment described? Describe each relevant parameter.	/1/	DR	Measurement equipment is only required for the water boiling test and kitchen performance test, and is defined by the selected international		OK

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Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
				testing protocol.		
D.7.4.	In case parameters are measured, is the measurement accuracy addressed and deemed appropriate? Describe each relevant parameter.	/1/	DR	Measurement equipment is only required for the water boiling test and kitchen performance test, and is defined by the selected international testing protocol.		OK
D.7.5.	In case parameters are measured, are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate? Describe each relevant parameter.	/1/	DR	Measurement equipment is only required for the water boiling test and kitchen performance test, and is defined by the selected international testing protocol.		OK
D.7.6.	Is the monitoring frequency adequate for all monitoring parameters? Describe each parameter.	/1/	DR	The monitoring frequency for all monitoring parameters is in accordance with the requirements of the methodology.		OK
D.7.7.	Is the recording frequency adequate for all monitoring parameters? Describe each parameter.	/1/ /27/	DR CC	No requirements are set by the methodology with regard to the recording frequency. This is likely to coincide with the monitoring frequency.		OK
D.7.8.	In case any of the parameters will be determined based on sampling, is the sample plan adequate and does it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, does it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?	/1/ /3/ /18/ /27/ /26/	DR CC	<p>Two parameters will be monitored based on sampling: N_y and η_{new}. The monitoring plan indicated that the required confidence/precision level adopted is the one indicated in the methodology, i.e. 95/10 if monitoring is carried out biannually, and 90/10 if annual.</p> <p>The PP calculates the required sample size for parameter $\eta_{new,y}$ in order to achieve a 90/10 confidence/precision level, and for parameter N_y achieve a 95/10 confidence/precision level.</p> <p>CAR12: The calculation of the minimum sample size for parameter $\eta_{new,y}$ results in a 20% relative precision. This is not in accordance with the methodology, which requires a 10% precision</p>	CAR12 CAR13 CL6	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>level for parameters monitored annually. Moreover, in the same equation the value of N is described inconsistently in the CPA-DD (i.e. 6 250 and 5 000), although it is correct in the actual calculations.</p> <p>CAR13: The calculation of the minimum sample size for parameter N_y results in a 20% relative precision. This is not in accordance with the methodology, which requires a 10% precision level for parameters monitored annually. Moreover, in the same equation the value of N is applied inconsistently (i.e. 6 250 and 7 725), although it is correct in the actual calculations.</p> <p>CL6: The PP is requested to justify the probability values applied to calculated the minimum sample size.</p> <p>The sampling framework applied to the CPA is consistent with the framework adopted at PoA level:</p> <ul style="list-style-type: none"> - The number of stoves in operation will be monitored through simple random sampling applied on the total population of the CPA, i.e. to all stoves distributed under the CPA. The choice is justified since the baseline survey performed in the CPA area confirmed the target population shares the same socio- 		

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>economic conditions and cooking habits;</p> <ul style="list-style-type: none"> - The stoves' efficiency will be monitored through simple random sampling on each vintage population, i.e. all stoves distributed within a period of 12 months. The CPA-DD indicates the estimated number of stoves that will be distributed during the first 12 months from the CPA's starting date, and the number of stoves that will be distributed in the second year. The sample size has been calculated based on these estimates by applying the provisions of relevant CDM rules on sample size calculation. The ER calculation spreadsheet submitted further demonstrates how the calculations are performed. The sample size is 53 devices for the first vintage (including a buffer sample to address the expected response rate), and 52 devices for the second vintage. The approach is in line with the provisions of the PoA with regard to monitoring the stoves' efficiency. 		
Ability of project participants to implement monitoring plan					
D.7.9. How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the CPA design?	/1/ /29/ /30/	DR I	The PP has detailed monitoring arrangements, and has already identified roles and responsibilities to implement the proposed monitoring plan. The monitoring arrangements described in the monitoring plan are feasible within the CPA design.		OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
D.7.10. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/	DR	Measures for data archiving are presented in the monitoring plan of the CPA. These appear adequate to support future requests for issuance.		OK
D.7.11. Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the CPA can be reported ex post and verified?	/1/	DR	The proposed monitoring plan presents the procedures for quality assurance and quality control. These appear to be sufficient to ensure that the emission reductions achieved by/resulting from the CPA can be reported ex post and verified		OK
D.7.12. Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this CPA, whichever occurs later?	/1/	DR	All monitored data required for verification and issuance will be kept for two years after the end of the crediting period or the last issuance of CERs, for the CPA, whichever occurs later. This is clearly stated in the monitoring plan.		OK
Monitoring of sustainable development indicators/ environmental impacts					
D.7.13. Is the monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country?	/1/ /39/	DR I	The monitoring of sustainable development indicators is not required by legislation in the host country. This was confirmed by DNV by a representative of the local DNA.		OK
D.7.14. Does the monitoring plan provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?	/1/ /39/	DR I	The monitoring of sustainable development indicators is not required by legislation in the host country. This was confirmed by DNV by a representative of the local DNA.		OK
D.7.15. Are the sustainable development indicators in line with stated national priorities in the host country?	/1/ /39/	DR I	The monitoring of sustainable development indicators is not required by legislation in the host country. This was confirmed by DNV by a representative of the local DNA.		OK

Table 2 Resolution of corrective action requests and clarification requests

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
CAR1: The CPA-DD indicates CarbonSinkGroup s.r.l.; Cloros Srl; and MAN.SE.F. Onlus as “other implementers of the CPA”, but their contact details are not indicated in Appendix 1 of the CPA-DD. The PP is requested to ensure consistency in the information presented in section A.6 and Annex 1 of the PoA-DD, the Letters of Approval and the Modalities of Communication form.	A.1.6	<p>The implementers of the CPA are AVSI Foundation, CarbonSinkGroup S.r.l. and Cloros S.r.l.</p> <p>The information presented in section A.6 and Annex 1 are now in consistence with the LoA achieved from DNA of Mozambique as well as with the Modalities of Communication form.</p> <p>The LoA and authorization for CarbonSinkGroup S.r.l. and Cloros S.r.l. has been requested from DNA of Italy. DNA of Italy will release these documents only when all the other CARs and CLs are closed.</p>	<p>Information on the project participants and their responsibilities is now indicated consistently between different project documents.</p> <p>CAR1 is closed.</p>
CAR2: Guidelines for sampling and surveys are missing from section B.1 of the CPA-DD, while they are mentioned in the monitoring plan.	D.1.1	Guidelines for sampling and surveys for CDM project activities and programme of activities (Version 03.0) together with all the other required guidelines, tools and standards are now mentioned in section D.1. Section D.1 is now in accordance with the equivalent section of the generic CPA described in the PoA-DD.	<p>The CPA-DD now includes an exhaustive list of guidance documents used.</p> <p>CAR2 is closed.</p>
CAR3: Not all the evidence submitted in support to the use of non-renewable biomass since 31 December 1989 is considered acceptable. The PP is requested to look at the validation of each	D.2.3	<p>The irrelevant references (Girad, 2011 and Perspectives GmbH, 2011) has been removed from section D.2.</p> <p>The use of non-renewable biomass since 31</p>	The project participant submitted valid evidence for the use of non-renewable biomass in the geographical area of the CPA since 1989.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
document and remove references to the documents that are not considered acceptable.		<p>December 1989 is demonstrated now by using the following valid (already submitted) references:</p> <ul style="list-style-type: none"> • Kityo Peter, 2004 • Ellegård et al., 2001 • FAO, 2010 	CAR3 is closed.
<p>CAR4:</p> <p>The 4th applicability condition of the methodology listed in the PoA-DD is not found in the methodology. The PP is not requested to demonstrate compliance with this applicability condition.</p>	D.2.5	<p>The 4th applicability condition listed before in section D.2 has been removed from the CPA-DD as well as from the equivalent section of the PoA-DD.</p>	<p>The CPA-DD conclusively demonstrates the applicability of the selected methodology.</p> <p>CAR4 is closed.</p>
<p>CAR5:</p> <p>The description of the baseline scenario in the CPA-DD does not describe the findings of the baseline survey. Moreover, the section called “Determination of baseline Emissions” in D.4 logically belongs to section D.6.1.</p>	D.4.9	<p>Section D.4. has been updated to include the description of the findings of the baseline survey.</p> <p>Moreover, the chapter “Determination of baseline Emissions” has been deleted from the section D.4. The relevant parts of it are now described, in more clear way, in the section D.6.1.</p>	<p>The description of the baseline and quantification of baseline emissions are now clearly described in the CPA-DD.</p> <p>CAR5 is closed.</p>
<p>CAR6:</p> <p>The baseline study indicates an average cost of 672.19 Meticaïs per month, not 675 as indicated in the CPA-DD.</p>	D.6.1	<p>The CPA-DD has been corrected to include the exact average monthly cost of charcoal (672.19 Meticaïs) in accordance with the baseline study.</p>	<p>The information presented in the CPA-DD is now consistent with supporting evidence.</p> <p>CAR6 is closed.</p>
<p>CAR7:</p> <p>The paper by Brouwer submitted as supporting evidence indicates a value of 7.14 kg, not 7.41 as indicated in the CAP-DD.</p>	D.6.1	<p>The CPA-DD has been updated to include the correct value of for the average woody biomass needed for production 1 kg of charcoal (7.14 kg) in accordance of the submitted supporting evidence.</p>	<p>The information presented in the CPA-DD is now consistent with supporting evidence.</p> <p>CAR7 is closed.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
<p>CAR8:</p> <p>According to the methodology the unit of measure of parameter B_{old} is “per device”. The PoA-DD and ex-ante calculations submitted indicate this parameter is currently expressed “per household”. The PP is requested to comply with the applied methodology in the calculation of baseline biomass consumption per device. Moreover, the PP is requested to ensure the monitoring plan, and more specifically the calculation of the sample size is expressed in a consistent manner, since it is foreseen that most households will receive two devices.</p>	D.6.1	<p>The PoA-DD, CPA-DD and the ex-ante calculations of CPA-01 has been updated. The parameter B_{old} is now expressed “per device”. Moreover, the monitoring plan and the sample size calculations are updated.</p>	<p>The calculation of parameter B_{old} complies with the requirements of the methodology since it is expressed per device.</p> <p>CAR8 is closed.</p>
<p>CAR9:</p> <p>According to the methodology, the fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass is a parameter that needs to be monitored. The project participant is requested to comply with this requirement.</p>	D.6.3	<p>The CPA-DD (as well as the PoA-DD) has been modified so that it states now that the parameter “fraction of woody biomass saved by the project activity in year y ($f_{NRB,y}$)” needs be monitored.</p>	<p>Parameter “fraction of woody biomass saved by the project activity in year y ($f_{NRB,y}$)” is included in the list of monitored parameters in section B.7.1 of the PoA-DD.</p> <p>CAR9 is closed.</p>
<p>CAR10:</p> <p>The name of parameter N_y is not consistent with the name indicated in the methodology.</p>	D.7.2	<p>The name of the parameter is corrected to be $N_{y,i}$ throughout the whole CPA-DD.</p>	<p>The parameter is now indicated in line with the methodology.</p> <p>CAR10 is closed.</p>
<p>CAR11:</p> <p>Parameter “t” included in the monitoring plan is not required by the methodology.</p>	D.7.2	<p>The parameter “t” has been removed from the monitoring plan.</p>	<p>The list of parameters monitored is now in line with the methodology.</p> <p>CAR11 is closed.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
<p>CAR12:</p> <p>The calculation of the minimum sample size for parameter $\eta_{\text{new},y}$ results in a 20% relative precision. This is not in accordance with the methodology, which requires a 10% precision level for parameters monitored annually. Moreover, in the same equation the value of N is described inconsistently in the CPA-DD (i.e. 6 250 and 5 000), although it is correct in the actual calculations.</p>	D.7.8	<p>The monitoring will be made with KPT instead of WBT. The calculations are updated to be in consistent with the CPA-DD and the methodology. For example, the calculation of the minimum sample size for parameter $B_{y,\text{new},\text{KPT}}$ is made with 10% relative precision in accordance with the methodology.</p>	<p>The calculation of the minimum sample size now ensures the required 10% precision level is reached, in accordance with the methodology.</p> <p>CAR12 is closed.</p>
<p>CAR13:</p> <p>The calculation of the minimum sample size for parameter N_y results in a 20% relative precision. This is not in accordance with the methodology, which requires a 10% precision level for parameters monitored annually. Moreover, in the same equation the value of N is applied inconsistently (i.e. 6 250 and 7 725), although it is correct in the actual calculations.</p>	D.7.8	<p>The calculation of the minimum sample size for parameter $N_{y,i}$ has been corrected to use 10 % relative precision in accordance with the methodology and to be in accordance with the description of CPA-DD.</p>	<p>The calculation of the minimum sample size now ensures the required 10% precision level is reached, in accordance with the methodology.</p> <p>CAR13 is closed.</p>
<p>CL1:</p> <p>The PP is requested to submit evidence for the stated operational time of the cookstoves.</p>	A.2.2	<p>A statement received on 4th of February 2014 from Envirofit has been added as supporting evidence.</p> <p>According the statement: “Envirofit warranties the CH-2200 stove for 5 years of life. This does not however represent the target design life of the stove, only the warranty period. With an appropriate education and monitoring process the expected life should be in excess of 7</p>	<p>The evidence submitted in support to the operational lifetime of 7 years /21/ is considered acceptable.</p> <p>CL1 is closed.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
		years.”.	
CL2: The PP is requested to provide evidence of the comments received during the local stakeholders consultation.	C.4	The minutes of the stakeholder meetings are submitted as evidence of the comments received during the local stakeholder consultation.	The project participant has submitted copies of the minutes recorded during the stakeholder meetings /9//10//11//12/. The comments are in line with those reported to DNV by stakeholders during the site visit, and are considered credible. The minutes were used to confirm the information included in the CPA-DD. CL2 is closed.
CL3: The PP is requested to submit evidence for the conversion from the cost of charcoal per month to the kg of charcoal per month.	D.6.1	The Market Study covering interviews of all the main charcoal sellers in the project area, as described in the updated version of the Baseline Study (Cooperação para o Desenvolvimento e Morada Humana (CMD)_2012), confirms that the average charcoal price was 8.4 Meticaís/kg in 2012. Consequently, the average monthly consumption of charcoal is 80 kg/household in the project area (672.19MT / 8.4MT/kg = 80kg). Moreover, as a confirmation for the finding of Baseline Study, the same level of the monthly consume of charcoal in kilograms (80.3 kg/month) is described in the recently published report “Mozambique Urban Biomass Energy Analysis 2012 - MAPUTO – MATOLA - BEIRA – NAMPULA” of Atanassov B., et al., 2012.	The information provided by the market study performed for the purpose of calculating ER for the CPA are in line with the information collected by DNV through interviews to users and sellers during the site visit on the use and price of charcoal. The market study is considered an acceptable source of data. CL3 is closed.
CL4:	D.6.1	The updated PoA-DD states that the project	It is the PP’s intention to only distribute

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
The PP is requested to clarify if the use of different fuels is foreseen, and in this case how the diversity is managed in the calculation of emission reductions, in particular with respect to conversion factors.		stoves of the CPAs can use also other biomass based fuels than charcoal. The project stoves of this CPA will anyhow use only charcoal as fuel.	cooking stoves under this CPA to charcoal users. CL4 is closed.
CL5: The PP is requested to explain how the ex-post ER calculations will account for households where a two-fires baseline stove is replaced by one improved cook stove, and cases where a one-fire baseline stove is replaced by two (or more) improved cookstoves.	D.6.1	<p>The monitoring of the fuel consumption in project situation will be made with the Kitchen Performance Test (KPT) on a representative sample of project stoves. During the KPT it will be recorded also the number of stoves used/household. The averagely fuel consume/stove achieved from this field test will be compared with the conservative baseline fuel consume/stove which has been estimated based on the Baseline Survey as described below.</p> <p>The Baseline Survey estimated the average baseline charcoal consumption per household to be 80kg//household/month. Moreover, around 61% of the households in the project area uses traditionally two-fire charcoal stoves and around 39% single-fire stoves. Based on the above, the average monthly baseline charcoal consume per device is estimated conservatively to be 55.6 kg/device/month ($0.61 \cdot 80\text{kg}/2 + 0.39 \cdot 80\text{kg} = 55.6\text{kg}$).</p>	<p>The difference in charcoal consumption between the baseline and project situation will be determined through a kitchen performance test. The test will record different consumption per device, and will therefore account for situations where more than one stove is used.</p> <p>CL5 is closed.</p>
CL6: The PP is requested to justify the probability	D.7.8	For the first monitoring event it is estimated that 80% of the distributed cook stoves will	The values used for the estimation of the stoves operationality is considered justified.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
values applied to calculated the minimum sample size.		<p>be operational and that 90% of the project stoves will operate at the desired efficiency. These assumption are based on the indications found from the registered and monitored cook stove projects. For example the Monitoring reports of CDM Project 2711 available at http://cdm.unfccc.int/Projects (site visited 10/04/2014).</p> <p>If the required precision (95/10 precision for biannual monitoring or 90/10 precision for annual monitoring) are not achieved with the calculated minimum sample sizes, then the lower bound of 95% or 90% confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve 95/10 or 90/10 precision.</p> <p>For oncoming monitoring events the probability values will be selected based on the results achieved during the previous monitoring results.</p>	CL6 is closed.

Table 3 Forward action requests

Forward action request	Reference to Table 2	Response by project participants
N/A		

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APPENDIX B

CURRICULA VITAE OF THE VALIDATION TEAM MEMBERS

Francesca Feller

Francesca started working in 2004 on the introduction of sustainable development and corporate responsibility best practices in Italy, to promote the adoption by national firms of the most recent sustainability strategies emerging from the international sustainability discourse. She subsequently moved on to work on climate change mitigation and adaptation in the urban environmental in London, taking part to a large urban regeneration project. The role combined achieving carbon reductions and climate-proof urban planning through interventions on existing structures as well as embedding sustainability in the design of new ones through urban renewable energy technologies, energy efficiency, and a large-scale district heating scheme. From 2009 Francesca worked on the preparation of technical and financial proposals for tenders financed by the United Nations, the World Bank, the European Union and the Italian Ministry of Foreign Affairs for development programmes. Her role as Project Manager focused on the supply of off-grid renewable energy technologies for rural electrification and improved access to energy. She currently works as Senior Climate Change Consultant for DNV Accredited Climate Change Services, where her position involves executing and managing project validation and verification in several technical areas (renewable energy, energy efficiency, waste management and forestry) under a United Nations scheme. In addition to verifications, Francesca is involved in other third party services, as well as in providing advisory services on climate change adaptation and mitigation to institutional customers, managing relations with large customers, and providing global support and training in the relevant specialized technical areas within the DNV global Climate Change Services team.

Krishnan Namboodiri

Krishnan Namboodiri, Senior CDM Specialist, DNV Kochi, India. Holds graduate degree in chemical engineering and has done a short term diploma course in Management. Prior to joining DNV in 2008, has had 24 years of direct work experience in the fertilizer and chemicals industry. Work experience covers 5 years in process design & engineering for chemical industry 7 years in technical services including environment management activities, 7 years in project management and 5 years in training & corporate planning in fertilizer & petrochemical manufacturing units. Has been actively involved in Management System Audits as per ISO 14001 for more than 8 years.

The above work experience includes-(a) experience in steam system optimisation & trouble shooting, development of improvement schemes in large fertiliser & caprolactum complex (b) Design and engineering, efficiency studies and development of efficiency improvement schemes for fossil fuel fired steam & power generation plants (c) Implementation of energy saving measures in Ammonia plants, sulphuric acid plant etc (d) Monitoring, trouble shooting and development & implementation of improvement schemes for pollution control facilities (chemical, aerobic & anaerobic treatment systems) in Fertiliser and petrochemical complex. Development & implementation of landfill facilities for solid and hazardous wastes from fertiliser & caprolactum manufacturing complex.

He has received extensive training in the CDM validation and verification process. He is an appointed GHG auditor for the CDM validation and verification program of DNV and has performed validation & verification and Technical Review of several CDM, VCS and GS projects in India and other countries.

His qualification, industrial experience and experience in CDM demonstrate his sufficient sectoral competence in (1) Thermal energy generation from fossil fuels as well as thermal electricity from solar and (2) waste handling and disposal. (3) Energy demand (4) Chemical process industries (5) Household end use energy efficiency and (6) Energy generation from renewable energy sources.

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