



VERIFICATION REPORT

ASSOCIATION POUR LE DÉVELOPPEMENT DE L'ENERGIE SOLAIRE SUISSE - MADAGASCAR (ADES)

VERIFICATION OF THE SOLAR AND EFFICIENT STOVES IN SOUTHWEST MADAGASCAR

REPORT No. KENYA-VER01/0003/2010

REVISION No. 04

BUREAU VERITAS CERTIFICATION

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VERIFICATION REPORT GOLD STANDARD VER 01

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Client: ADES	Client ref.: Mr. Tobias Hoeck

Summary:

Bureau Veritas Certification has made the Gold Standard retroactive verification of the Solar and efficient stoves in southwest Madagascar, GS Registration Reference Number GS464, project of Association pour le Développement de l'Energie Solaire (ADES) located in BP 637 - Route de Betanimena, Tuléar, Madagascar, and applying the methodology Improved Cook-stoves and Kitchen Regimes version V.01, on the basis of requirements for Voluntary offset project under Gold Standard version 1 UNFCCC/GS criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Designated Operational Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in validated and registered Gold Standard project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project has been generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the voluntary emission reductions issued totalize 6,398 tons of CO₂eq for the monitoring period from 01/01/2008 to 22/12/2009

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring, the sustainable development indicators reported and its associated documents.

Report No.: KENYA-ver01/0003/2010	Subject Group: GS –VER 01	
Project title: Solar and efficient stoves in southwest Madagascar		
Work carried out by: Ashok Mammen - Lead Verifier James Metto – Verifer and sector specialist Andrew Kinyanjui - Verifier		
Internal Technical Review carried out by: Peter Huang Qin		
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Work approved by:

Flavio Gomes

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1 INTRODUCTION

Association pour le Développement de l'Energie Solaire (ADES) has commissioned Bureau Veritas Certification to verify the emissions reductions of its Gold Standard project Solar and efficient stoves in southwest Madagascar (hereafter called "the project") at BP 637 - Route de Betanimena, Tuléar, Madagascar.

This report summarizes the findings of the verification of the project, performed on the basis of requirements for Voluntary Offset Projects under the Gold Standard Version 01, UNFCCC criteria as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

In carrying out its verification work, the DOE shall ensure that the project activity complies with the requirements of paragraph 62 of the CDM modalities and procedures as well as Gold Standard Version 01 requirements.

Based on the applicable requirements, this assessment shall:

- (a) Ensure that the project activity has been implemented and operated as per the registered PDD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- (b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs and verifiable and in accordance with applicable GS requirements;
- (c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology;
- (d) Evaluate the data recorded and stored as per the monitoring methodology.
- (e) The GS verification is based on the GS Monitoring plan and the additional requirements stated by the Gold Standard



1.2 Scope

The verification scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, requirements for Voluntary Offset Projects under the Gold Standard Ver 01, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 GHG Project Description

The project (reference number GS464) applies the "Gold Standard Methodology for Improved Cook-stoves and Kitchen Regimes V.01", approved by the GS TA.

The registered Project is located in the Republic of Madagascar, Southwest Madagascar consisting of the 6 regions of Menabe, Atsimo-Andrefana, Androy, Anosy, Melaky and Boeny.

The exact geographical positions of the centres are:

Toliara: 23°21'S 43°40'E,

Ejeda: 24°21'S 44°31'E,

Morondava: 20°17'5"S, 44°19'3"E,

Ambovombe: 21°30'13"S, 45°12'34"E,

Mahajanga: 15°43'S, 46°19'E,

Ihosal: 22°24'S 46°07'E,

Antsirabe: 19°52'S, 47°02'E

all these areas are in south western Madagascar.

The project was registered with the Gold Standard on 23/12/2009, this verification is a determination for 2 years retrospective emission reductions during 01/01/2008 – 22/12/2009.

According to GS Requirement 2.1-V.a.2.3, Project activities proceeding under the retroactive project cycle, may be eligible for retroactive crediting for realised emission reductions prior to Gold Standard registration of a maximum period of two years.

(a) The project was registered on 23/12/2009
<https://gs1.apx.com/myModule/ProjectDoc/EditProjectDoc.asp?id1=464>

(b) Start date of crediting period is chosen as 01/01/2008 in "0912_ADES_GS_VER_PDD_version5"



(C) Hence the retroactive crediting period claimed in "1103_ADES_monitoring_report_V04" i.e. 01/01/2008 to 22/12/2009 is deemed appropriate.

The project is categorized as large-scale project and is a renewable energy & energy efficiency project, which improves the environment resulting in less deforestation and less air pollution.

Project activity is production and distribution of solar and efficient cook stoves to people in Southwest Madagascar. The solar and efficient cook stoves replace baseline traditional woodstoves and charcoal stoves. In absence of the project activity the thermal energy needs for cooking applications in the south- southwest of Madagascar would be fulfilled by the use of wood-fuel or charcoal, most of which is non-renewable biomass from primary forests.

The project also contributes to Sustainable Development like, reduction of airborne emissions due to combustion of wood and charcoal, transfer of the solar cooker technology to different regions of Madagascar, Creation of new jobs for production and dissemination of the stoves and avoidance of time-intensive search for fuel wood.

1.4 Verification Team

The verification team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER*	TASK PERFORMED
Lead Verifier	Dr. Ashok Mammen	☒ Yes ☐ No	☒ DR ☐ SV ☒ RI
Verifier	James Metto	☒ Yes ☐ No	☒ DR ☒ SV ☐ RI
Verifier	Andrew Kinyanjui	☐ Yes ☒ No	☒ DR ☒ SV ☐ RI
Technical Specialist	None	☐ Yes ☐ No	☐ DR ☐ SV ☐ RI
Internal Technical Reviewer (ITR)	Huang Qin	☒ Yes ☐ No	☒ DR ☐ SV ☐ RI
Specialist supporting ITR		☐ Yes ☐ No	☐ DR ☐ SV ☐ RI

*DR = Document Review; SV = Site Visit; RI = Report issuance

2 METHODOLOGY

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.



In order to ensure transparency, a verification protocol was customized for the project, according to the version 01.2 of the Clean Development Mechanism Validation and Verification Manual, issued by the Executive Board at its 55th meeting on 30/07/2010 and Gold Standard Validation and Verification Manual for CDM projects issued by Gold Standard in December 2006. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The completed verification protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The verification of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the monitoring report submitted to the DOE. Qualitative information comprises information on internal management controls, calculation procedures, procedures for transfer of data, frequency of emissions reports, and review and internal audit of calculations.

In addition to the monitoring documentation provided by the project participants, the DOE reviews:

- (a) The registered GS-VER PDD, including the monitoring plan and the corresponding validation report;
- (b) Previous verification reports, if any;
- (c) The applied monitoring methodology;
- (d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board;
- (e) Any other information and references relevant to the project activity's resulting emission reductions (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).



The verification conclusions presented in this report relate to the project as described in the GS-VER PDD version 5 and GS-MR version 04 dated 31/03/2011.

2.2 Follow-up Interviews

Between 28/06/2010 and 03/07/2010 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of ADES were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
ADES	➤ Staff Training, ➤ Sales Records ➤ Production Records ➤ Project operation ➤ GS sustainability
LOCAL Stakeholder	➤ Relevance of Sustainability Criteria ➤ Fuel savings ➤ Fuel Costs ➤ Compliance with National Laws and Regulations
MyClimate	➤ Project Design and implementation ➤ Monitoring Plan and management procedures ➤ Monitoring data ➤ GHG Calculation ➤ Data uncertainty and residual risks (QA/QC) ➤ Environmental Impacts ➤ Compliance with National Laws and Regulations
Director of Forest and Environment of the Region (Tuléar)	➤ Compliance with National Laws and Regulations
Chief of Quarter (Antaravay)	➤ GS sustainability

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

Findings established during the initial verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) is issued, where:



(a) Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;

(b) Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;

(c) Issues identified in a FAR during validation or previous verifications to be verified during verification have not been resolved by the project participants.

Forward Action Requests (FAR) are issued, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

The verification team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable GS requirements have been met.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

2.4 Internal Quality Control

The verification report underwent a Technical Review (TR) before requesting issuance of GS-VERs for the project activity.

The TR is an independent process performed to examine thoroughly that the process of verification has been carried out in conformance with the requirements of the verification scheme as well as internal Bureau Veritas Certification procedures.

The Lead Verifier provides a copy of the verification report to the reviewer, including any necessary verification documentation. The reviewer reviews the submitted documentation for conformance with the verification scheme. This will be a comprehensive review of all documentation generated during the verification process.

When performing a Technical Review, the reviewer ensures that:

The verification activity has been performed by the team by exercising utmost diligence and complete adherence to the GS rules and requirements.



The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the verification exercise, review of sample documents.

The reviewer compiles clarification questions for the Lead Verifier and Verification Team and discusses these matters with Lead Verifier.

After the agreement of the responses on the 'Clarification Request' from the Lead Verifier as well as the PP(s) the finalized verification report is accepted for further processing such as uploading on the GS webpage.

3 VERIFICATION CONCLUSIONS

In the following sections, the conclusions of the verification are stated.

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 4 Corrective Action Requests, 7 Clarification Requests, and 0 Forward Action Request.

The CARs, CLs and FARs were closed based on adequate responses from the Project Participant(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section corresponds to the VVM paragraph.

3.1 Project implementation in accordance with the registered project design document (198)

BVC has performed a site visit and found that the project has been put into operation.

[Technical description of the project stoves]

Solar box stove:



Fig1



Fig2

The box type solar stove Fig1; is an insulated box that directs solar energy into a cooking compartment, the cooking compartment is thermally insulated with a double glass cover and internally insulated with a double insulated walls, an installed temperature gauge to monitor solar radiation temperatures of up to 150°C whereby energy output of Energy output 0.2kW is achieved. Dimensions of the solar box have been maintained from project start by use of pre-determined jigs. Quality control ensures that all boxes are fabricated from similar materials and with similar dimensions. Fig 2. Use of jigs was witnessed in site visit at the production centres in Madagascar. The solar box stove has a lifetime of 7 years for which ADES gives warranty and provides free repair service during the warranty period.

Parabolic solar stove:



Fig 3

The parabolic solar stove is constructed with weatherproof shining aluminium (mirror) and the base frame is made of zinc coated steel (galvanised). The parabolic mirror gathers the sun rays and this process leads to high temperatures at the focal point (fig 3). These temperatures are high enough to cook, bake, grill and even fry. The mirror parts and the frame of the stove are fabricated in Madagascar. ADES then assembles the parabolic solar stove in its decentralized workshops. The parabolic solar stove has a lifetime of 7 years for which ADES gives warranty and provides free repair service during the warranty period. Thermal output of the stove is Energy output: 0.6 kW

Efficient wood-fired / charcoal-fired stove:



Fig 4

The efficient wood or charcoal fired stove is a simple steel construction with insulating material inside. This stove has an energy efficiency 30%, and improves the energy efficiency of the cooking process by 50-60% compared to the traditional cooking on the open fire. The efficient stove has a lifetime of 7 years for which ADES gives warranty and provides free repair service during the warranty period. Energy output of the stove is 1.5 kW. Material composition and structural design of the brick liner have been maintained hence there have been no changes of the project.

The parameters and specifications for stoves monitored are corresponding with specifications in registered PDD. Stoves under construction and distribution during site visit are complying with technical parameters in registered PDD.

[Project implementation]

The project start date is 27/8/2007 when wood treatment machines for stove construction were purchased, and the purchase / delivery documents reviewed during site visit confirmed the same. The dates when the first stoves per respective sites were contracted are: 04/01/2008 for Tulear, 29/1/2008 for Ejeda and 30/5/2008 for Morondova site.



The progress of the GS project activity in this retroactive monitoring period achieved is; production and distribution centres in Tuléar, Ejeda and Morondava are all in operation. A production centre in Ambovombe has not been established yet, and a fourth new centre to be opened in Morombe in late 2010 located in the north of Tuléar.

The number of stoves sold in monitoring period for which Emission reductions are claimed is 2,014 stoves, the figures were crosschecked from sales records and project database records and are determined as accurate.

Table 2

Year	Number of stoves sold				Cluster	
	Total	Box	Parabol	Yoyo	Wood	Charcoal
2008	1436	1365	53	18	806	630
2009	578	565	13	0	204	374
Total	2014	1930	66	18	1010	1004

The project boundary is defined and includes;

- The place of the kitchens where the project stoves (solar and efficient) are applied
- The place of fuel collection, production and transport, located in the fuel collection area. This Area is defined as well as the former Province of Tuléar, today consisting of the 3 regions of Menabe, Sud-Ouest et Androy-Anosy. This definition is done to take account to the available forestry data, which normally refers to the former provinces. This definition means that the remote regions where deforestation is lower (because the fuel is mainly collected close to the cities) are also included in the Fuel Collection Area, which leads to a conservative estimation of emission reductions.

A stove passport (containing information such as stove number, date of sale, name of stove buyer) created for every stove sold is kept as paper record at the corresponding stove production centre. Sales records are compiled in electronic format at every production centre and reported to the ADES CO2-manager in Tuléar on a weekly basis. In Tuléar the sales records from the different production centres are checked and compiled in the Total Sales Record of the project activity. During monitoring activities the ADES CO2-manager checks stove sales in the three production centres and compares paper records with electronic sales records. The Total Sales Record is submitted to the ADES CO2-manager in Switzerland, where data is checked on its accuracy and consistency. For final check and for statistical analysis, the Total Sales Record is submitted to myclimate. Kitchen Surveys, Kitchen Tests and other surveys paper records are kept with the ADES CO2-manager in Tuléar,



Madagascar. Surveys are conducted by the CO2-manager in collaboration with a representative from the corresponding production centre.

Since the start of fabrication of stoves in 2007, ADES has continuously increased its activities and also the number of employees from 22 in 2007 to 45 by the end of 2009

Key parameter values remain the same as in the validated and registered PDD because this is the retroactive monitoring period and most parameters need not to be re-assessed during this monitoring period as per the required bi-annually monitoring frequency.

[FAR from Validation]

It is determined that linkage to VER's through grants to ADES is sufficiently eliminated by signed VERPA signed between ADES and Myclimate as well as submitted declaration from the Swiss Agency for Development and Cooperation (SDC) for ODA, and hence this FAR-1 is closed.

3.2 Compliance of the monitoring plan with the monitoring methodology (203)

The monitoring plan is in accordance with the approved methodology applied by the proposed Gold Standard project activity

3.3 Compliance of monitoring with the monitoring plan (206)

Monitoring has been carried out in accordance with the monitoring plan contained in the registered GS-VER PDD.

The parameters required by the monitoring plan and the way the Verification Team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values in the monitoring reports) are described below:

[Periodic monitoring tasks]

(a) Non-renewability of woody biomass fuel in the project in year $y = X_{nrb,pj,y}$ - Assessment of NRB-fraction was done for the PDD and revised and re-assessed during validation and registration. This parameter is recorded every two years. Thus, a re-assessment is due in 2011. The value of this parameter remains the same as in the PDD: NRB fraction = 49.26%

(b) Mass of woody biomass combusted in the project in year $y = B_{pj,y}$ - this value is adapted to lower bound of confidence interval &



seasonal/weekly variations and parameter remains the same as in the validated and registered PDD: 0.788t/y for Charcoal and 2.604 t/y for wood

(c) The mass of alternative fuel i combusted in the project in year $y = AF_{pj,i,y}$ - This parameter Values remain the same as in the validated and registered PDD and is applied for purposes of this retroactive monitoring: $AF_{pj,i,y} = 0$

(d) Percentage of stoves of age z remaining in use in year $y = Usage_{z,y}$ Values for this parameter remain the same as in the validated and registered PDD: A drop-off rate of 10% per year is assumed. Hence after one year of operation 90% of stoves are still in use.

(e) Adjustment to values of $B_{pj,y}$ and $AF_{pj,i,y}$ for stoves of age $x = Age_{z,y}$ - Aging-stove kitchen test is undertaken for sales made in the first year to measure fuel reduction performance in successive years of stoves of Age x , this test is due in 2010 hence the same value in PDD is applied value "1" for the first two project years

(f) Adjustment to values of $B_{pj,y}$ for new stove models = New Stoves – No new stoves were introduced in this monitoring period

(g) Measurements for Potential Leakage Effects = monitoring of this parameter is done for wood and charcoal cluster by way of survey and estimated every two years.

[Continuous monitoring task]

(h) Total sales record = The sales record is Stove Sales from 01/01/January 2008 to 22/12/2009 (Ref-04, section 05) – integrity of the sales record was accepted by reviewing data from sampled stoves the following records were viewed and traced to ascertain accuracy;

- Date and location of Sale,
- Mode of use: resale/onward retailing, institutional or other
- Number / Model / type of stoves purchased and their identification numbers
- Cluster inclusion (wood or charcoal user)
- Addresses and names and telephone numbers of purchaser's retailers and institutional recipients and domestic end users

(i) Detailed customer database = The detailed customer database is updated and maintained by the monitoring manager in Madagascar, entries cross checked from sales records were accurately captured in the customer database, and hence can be deemed reliable. Results from Kitchen Surveys (both project and monitoring) and Monitoring Kitchen Tests are used in filling the Detailed Customer database (Ref-06, section



05). According to monitoring plan, KS is carried out every six months. This verification report is retroactive and takes into account KS carried out prior to project registration. KS for charcoal and wood clusters have been carried out in Q1 2010.

(j) Project Database = According to monitoring plan the responsibility to monitor Project Database is with ADES Monitoring head based in Madagascar and myclimate this was demonstrated at site visit and interviews. The Project Database contents originate from past Kitchen Surveys and Kitchen Tests. Clusters and pertinent adjustments for emission reduction calculations are presented in Project Database (Ref-03, section 05). The database was cross checked for errors and data entry and found to be accurate.

(k) Monitoring Kitchen Surveys = According to the monitoring plan at least 25 kitchens from each cluster are visited every six months. This parameter is monitored and KS for charcoal and wood clusters have been carried out in Q1 2010 (Ref-18&19, section 05) and presented to verifier for review during site visit. There are two clusters in the project. Monitoring is carried out by the monitoring manager in Madagascar and reported to the monitoring manager for ADES in Switzerland.

(l) Social and Economic Impact assessment = this parameter is monitored through three sustainability criteria SD1) Jobs created by ADES, SD2) Schools visited by ADES and SD3) Expenses for wood and charcoal. Measurement of the parameters is monitored every two years through kitchen survey and reported in ADES annual report (Ref- 22 section05). Data in this monitoring period was availed at site visit.

(m) ADES has archived sales receipts and production logs that allow cross checks of sales, the sales records were checked by a third party, Consultant – Haja Razafimahazo, the consultant has audited sales entries spreadsheets and financial accounts to confirm that sales records were conservative, as expressed in their sales audit report (Ref-05, section 05).

[Other Monitoring task]

(m) Similar new project activity in the project area = new project activity - Blue Ventures a British non-governmental marine conservation organization whose main goal is conserving the coral reef in southwest Madagascar buys solar and efficient cook stoves from ADES and distributes them to the local population. The solar and efficient stoves that were sold to Blue Ventures by ADES are not used to generate carbon credits for this Gold Standard project. This was confirmed by crosschecking project database and cook stoves dispatch records to Blue Ventures.

**[Management system]**

As per the registered GS-VER-PDD Ver5, the Monitoring plan has clearly prescribed the management and operational procedures for the various steps including the data management (monitoring, recording, backup and audit) and training for relevant personnel involved in the Project. The Management System for the Project including the organization structure had defined responsibilities to determine effectiveness of the monitoring process for the Gold Standard project. BVC has verified the Management and Quality Assurance procedures and found the management and operational system appropriate and effective.

3.4 Assessment of data and calculation of greenhouse gas emission reductions (209)

The following actions were taken to ensure that the most conservative assumption theoretically possible has been made:

- (a) The lower bound of confidence interval is applied in estimation of emission reductions calculated based on KT results as required by the methodology hence a Lower confidence limit of 90% is applied to both Charcoal and wood clusters
- (b) The drop-off rate of 10% for stove sales in 2008 is considered: For every stove being in operation for more than one year, the stove days in its second operational year are reduced by 10%. This provides for every stove the corrected number of stove days in projects second year of operation.
- (c) NRB fraction = 49.26% is applied this value is deemed conservative as justified in the registered PDD Annex 5 of all scenarios below;
- (d) Combination of clusters is justified in PDD step 1.4 for the verified monitoring period. Of a sample of 200 households only 4 of the 200 used both wood and charcoal (Ref-03 section 05) project database. Hence the delineation is acceptable.
- (e) Seasonal / weekend variation factors – according to kitchen survey Kitchen Survey Report (Ref- 16 section05) dated 1/12/2008 It is proposed to subtract from fuel use values measured in winter and on week-days 9.1% for wood users and 7.7% for charcoal fuel users and recommended to carry out kitchen surveys in all seasons during monitoring to get more stable results and to distinguish between project and baseline case.



Appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed.

$$\begin{aligned}\Sigma BE_{i,y} &= BE_y (\text{charcoal}) + BE_y (\text{wood}) \\ &= Ny(\text{charcoal}) * 6.288 \text{tCO}_2\text{eq} + Ny(\text{wood}) * 5.312 \text{tCO}_2\text{eq}\end{aligned}$$

$$\begin{aligned}\Sigma PE_{i,y} &= PE_y (\text{charcoal}) + PE_y (\text{wood}) \\ &= Ny(\text{charcoal}) * 3.059 \text{tCO}_2\text{eq} * \text{Age}_{z,z} + Ny(\text{wood}) * 2.550 \text{tCO}_2\text{eq} * \text{Age}_{z,z}\end{aligned}$$

$$\begin{aligned}\Sigma LE_{i,y} &= LE_y (\text{charcoal}) + LE_y (\text{wood}) \\ &= Ny(\text{charcoal}) * 0 \text{tCO}_2\text{eq} * \text{Age}_{z,z} + Ny(\text{wood}) * 0 \text{tCO}_2\text{eq} * \text{Age}_{z,z} \\ &= 0 \text{tCO}_2\text{eq}\end{aligned}$$

$$\begin{aligned}ER_y &= \Sigma BE_{i,y} - \Sigma PE_{i,y} - \Sigma LE_{i,y} \\ &= Ny(\text{charcoal}) * 6.288 \text{tCO}_2\text{eq} + Ny(\text{wood}) * 5.312 \text{tCO}_2\text{eq} - \\ &\quad Ny(\text{charcoal}) * 3.059 \text{tCO}_2\text{eq} * \text{Age}_{z,z} - Ny(\text{wood}) * 2.550 \text{tCO}_2\text{eq} * \text{Age}_{z,z} \\ &= Ny(\text{charcoal}) * 3.229 \text{tCO}_2\text{eq} + Ny(\text{wood}) * 2.762 \text{tCO}_2\text{eq}\end{aligned}$$

$$\begin{aligned}Ny(\text{wood}) &= 1252 \text{ stove years} \\ Ny(\text{charcoal}) &= 911 \text{ stove years} \\ \text{Age } z &= 1\end{aligned}$$

$$\begin{aligned}ER_y &= 911 * 6.288 \text{tCO}_2\text{eq} + 1252 * 5.312 \text{tCO}_2\text{eq} - 911 * 3.059 \text{tCO}_2\text{eq} * \text{Age}_{z,z} - \\ &\quad 1252 * 2.550 \text{tCO}_2\text{eq} * \text{Age}_{z,z} \\ &= 5726 \text{tCO}_2\text{eq} + 6650.6 \text{tCO}_2\text{eq} - 2785 \text{tCO}_2\text{eq} - 3192.6 \text{tCO}_2\text{eq}\end{aligned}$$

$$ER_y = 6398 \text{tCO}_2\text{eq}$$

All the necessary data and all the parameters foreseen to be monitored in the registered GS-VER-PDD were available to the DOE. The assumptions, emission factors and default values that were applied in the calculations have been justified. This is in reference to both PDD and monitoring report values including spreadsheet annexure provided.

[Comparison of ERs]

According to the registered GS-VER-PDD, estimated emission reductions by vintage; year 2008 = 5676 CO₂e and year 2009 = 13953 CO₂e totalling 19629 CO₂e. Monitoring report for the same period is 6398 tCO₂eq, the difference of 13231 CO₂e is attributed to suppressed distribution of stoves in project areas as a result of political problems.

3.5 Gold Standard Requirements - Sustainable Development Indicators

The Sustainable Development Indicators parameters monitored on an ongoing basis included Job Creation, Schools visited and expenses for wood and charcoal.



(a) Jobs created by ADES – Employment, termination and internship data and interviews in ADES from years 2007, 2008, 2009 and 2010, increase of employees in ADES over the period 2007 to 2009 has increased from 22 to 45 employees. Employment of people in the Head office and Tulear, Ejeda, Morondava, and Andavadoaka regions was been demonstrable from the reviewed records of employment which contribute to overall increase in staffing from 22 people in 2007 compared to 45 people by end of 2009. All 45 people employed by 2009 were locals.

(b) Schools visited by ADES – The verification team visited schools in Tulear and Ejeda to interview the head of institutions as well as view pertinent records retained by the school i.e. pictures, interviews also covered pupils and students at the school to verify transfer of knowledge to both staff and students, ADES has visited 33 schools in Tulear, Ejeda and Morondava within the monitoring period 1/1/2008 to 22/12/2009.

(c) Expenses for wood and charcoal - this parameter is monitored every two years using the Kitchen Survey – this parameter was determined prior to Validation and during this retroactive monitoring period the values will not be changed.

The verification team has interviewed users of ADES stoves to cross check the expenses for wood and charcoal. Monitoring report Version 04 estimate for expenses averaging Ariary 9,900 (approx 3.67 EUR) per month to purchase charcoal and average Ariary 18,667 (approx 6.91 EUR) per month for households that purchase fuel wood were witnessed through site visit interviews.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the retroactive verification of the Solar and efficient stoves Project in southwest Madagascar, which applies the methodology “ Indicative Programme, Baseline, and Monitoring Methodology for Improved Cook-Stoves and Kitchen Regimes ” version 01. The verification was performed on the basis of Gold Standard Version 01 requirements, UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of ADES is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project



on the basis set out within the project Monitoring and Verification Plan indicated in the final GS-VER PDD version 5. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 04 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project has been generating GHG emission reductions

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 01/01/2008 to 22/12/2009

Baseline emissions : 12,376 t CO₂ equivalents.

Project emissions : 5,977 t CO₂ equivalents.

Leakage emissions : 0 t CO₂ equivalents

Emission reductions : 6,398 t CO₂ equivalents

Emission Reductions from 01/01/2008 to 31/12/2008 ----- 1,946 t CO₂ equivalents

Emission Reductions from 01/01/2009 to 22/12/2009 ----- 4,452 t CO₂ equivalents

08/06/2011

Huang Qin
Internal Technical Reviewer

08/06/2011

Ashok Mammen
Lead Verifier



5 REFERENCES

Category 1 Documents:

Documents provided by ADES that relate directly to the GHG components of the project.

- /1/ Monitoring report version 04 dated 31/03/2011
- /2/ Monitoring report version 01 dated 15/05/2010
- /3/ Project database: 1103_ADES_Project_Database_0809.xlsx
- /4/ Sales record: 1006_ADES_Total_Sales_Record_0809.xlsx
- /5/ Sales Audit report dated 15/07/2010; 1009_ADES_sales_audit_report.xlsx
- /6/ Detailed Customer Database: 0903_ADES_customer_database(1).xls

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /7/ GS-VER PDD version 05 dated 21/12/2009
- /8/ Validation report revision 03 dated 23/09/2009
- /9/ Gold Standard Methodology for Improved Cook-stoves and Kitchen Regimes V.01
- /10/ List of employees 2008
- /11/ List of employees 2009
- /12/ List of Schools Visited
- /13/ Employment contracts
- /14/ Swiss Agency for Development & Cooperation (SDC) Declaration dated 01/09/2010
- /15/ Photographs
- /16/ Kitchen Survey report version 3.2 dated 01/12/2008
- /17/ Kitchen Survey Questionnaires
- /18/ Kitchen Survey database (Charcoal)
- /19/ Kitchen Survey database (Wood)
- /20/ Cooking demonstration database for 2008 and 2009;
- /21/ Project Monitoring plan
- /22/ ADES Annual Report dated 12/02/2010

Persons interviewed:

List persons interviewed during the verification or persons that contributed with other information that are not included in the documents listed above.

- /1/ Razafimanaranijoa Andriamifidy – Manager Co2 ADES
- /2/ Frei Otto – Coordinator ADES
- /3/ Hanspeter Frei – Swiss Co2 Manager
- /4/ Randrianirina Jose Patrick – Directeur ADES Centre
- /5/ Etienne – Director of City School



- /6/ Lalason Vean – Chief of SAF (Mayors office)
- /7/ Rakotomalala Joseph – Chief of Quarter Antaravay
- /8/ Andriamahafaly Mike – Director of forest and Environment of the region
- /9/ Rehosoe Pradd – Directeur Ejeda region
- /10/ Remedre – Quarter of Satrampoty
- /11/ Pere Marco – Directeur of Michel Canone College
- /12/ Sylvain – Responsible for WWF; Ejeda
- /13/ Tobias Hoeck - Myclimate

6. CURRICULA VITAE OF THE DOE'S VERIFICATION TEAM MEMBERS

Bureau Veritas Certification - Lead Verifier and team leader – Dr. Ashok Mammen

Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor and tutor for environment, safety and quality management systems. He is also a lead verifier and lead tutor for GHG projects and has been involved in the validation and verification processes of more than 100 CDM/JI/VCS and other GHG projects



VERIFICATION REPORT GOLD STANDARD VER 01

Bureau Veritas Certification, Team Member, Climate Change Verifier – James Metto

James Metto – is a Bachelor of Science graduate in Agricultural Engineering with experience in Quality and Environmental management in Engineering, Manufacturing, chemical and Service Industries. He is ISO 9001:2008 and ISO 14001:2004 Lead Auditor and has also experience in the implementation of Environmental Management Systems. James is qualified as a Verifier GHG – Green House Gases.

Bureau Veritas Certification, Team Member, Climate Change Verifier – Andrew Kinyanjui

Andrew Kinyanjui - is a Diploma holder in Chemical Engineering. He had 5 yrs experience in Industrial production and soft drinks products before joining BV. He has obtained 6 years experience in management systems audits and training and two years experience in CDM validation / verification at BV. He obtained the certificate of CDM Lead Verifier certificate and Lead auditor for ISO 14001

Bureau Veritas Certification internal Reviewer – Huang Qin

Peter Huang Qin – Holds a MSc in Industrial Ecology. Before joining BV in Jan 2010, he gained 1.5 years of CDM audit experience and 2 years of technical experience in power industry. He obtained the certificate of GHG Auditor, Lead Auditor for EMS ISO 14001 and has successfully completed the course assessment for ISO 14064:2006.



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APPENDIX A: COMPANY CDM PROJECT VERIFICATION PROTOCOL

Table 1 Verification requirements VVM version 01.2 and GS-VER Validation and Verification Manual

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1 Project implementation in accordance with the registered project design document					
It is assessed if the GS VER project activity has been implemented and operated as per the registered PDD*	VVM	195			
a Are all physical features of the proposed GS VER project activity, proposed in the registered PDD, in place?	VVM	195	All the physical features of the GS VER project activity reviewed based on the registered PDD were found in place during the site visit carried out from 28 th June to 3 rd July 2010. The project is a stove manufacturing business which reduces green-house gas emissions by disseminating Solar and fuel-efficient stoves. The manufacturing, distribution process and usage at a households and school was reviewed during the site visit and found to be in place.	OK	OK
b Have the project participants operated the proposed GS VER project activity as per the registered PDD?	VVM	195	The project participant has operated the proposed GS VER project activity as per the registered PDD It was however noted that the PDD states that "Avoidance of double counting / securing ownership; The stove buyers are informed that	CAR 1	OK

* This Q is 'Requirement to be verified' in VVM.



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<i>they are not allowed to make further money by marketing the stove as the added value is already included in the Sales price. Moreover, the stove owners sign a form, where it is mentioned that the rights on emissions reductions from the use of the stove are transferred to ADES” however during the site visit the signing of the form by customers had not been done although the form with the rights had been developed</i>		
c Is the proposed GS VER project implemented against the description in the PDD?	VVM	195	Yes the project as been implemented as per the description of the registered PDD	OK	OK
d Was an on-site visit conducted?	VVM	195	Yes. The onsite visit was conducted on June 28 – July 03, 2010. This was the first verification covering the pre-registration period. The audit purpose and methodology was explained in the meeting participated by the following persons. Mr. James Metto - Bureau Veritas Certification. Mr. Andrew Kinyanjui - Bureau Veritas Certification Mr. Hans Peter Frei – Swiss Co2 Manager Mr. Otto Frei – ADES National Coordinator Mr. Razafimanaranijoa Andriamifify – Manager Co2 ADES Madagascar	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
e If not, justify the rationale of the decision.	VVM	195	N/A		
2 Compliance of the monitoring plan with the monitoring methodology					
It Is assessed if the monitoring plan of the proposed CDM project activity is in accordance with the applied methodology	VVM	199			
a Is the validated monitoring plan in accordance with the approved methodology applied by the proposed CDM project activity?	VVM	199	The validated monitoring plan is in accordance with the approved methodology applied by the proposed GS project activity i.e. the Indicative programme, Baseline and monitoring methodology for Improved Cook-Stoves and Kitchen Regimes V.01	OK	OK
b If no, was a request for revision of the monitoring plan was done? (The DOE may request for revision of the monitoring plan covering the monitoring period under verification, for approval by the CDM Executive Board)	VVM	200	Not Applicable	OK	OK
c Are there any monitoring aspects of the project activity that are not specified in the methodology, particularly in the case of small-scale methodologies (e.g. additional monitoring parameters, monitoring frequency and calibration frequency)?	VVM	201	No all the monitoring aspects of the project activity are specified by the Methodology	OK	OK
3 Compliance of monitoring with the monitoring plan					



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
It is assessed if monitoring of reductions in GHG emissions to result from the proposed GS - VER project activity is implemented in accordance with the monitoring plan contained in the registered PDD or the accepted revised monitoring plan*.	VVM	203			
a Have the monitoring plan and the applied methodology been properly implemented and followed by the project participants?	VVM	204	The monitoring plan and the applied methodology have been properly implemented and followed by the project participants it was however noted that the monitoring report provided extends beyond the Pre-registration period	CAR 2	OK
b Have all parameters stated in the monitoring plan, the applied methodology and relevant GS - VER requirements been sufficiently monitored and updated as applicable, including:	VVM	204	Details Indicated below		
i Project emission parameters?	VVM	201	CO2 emission factor arising from use of biomass, CO2 emission factor arising from use of alternative fuel, Non-CO2 emission factor arising from use of biomass, Non-CO2 emission factor arising from use of alternative fuel, CO2 emission factor arising from production of wood-fuel, CO2 emission factor arising from production of	Ok	OK



VERIFICATION REPORT GOLD STANDARD VER 01

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			alternative fuel, Non-CO2 emission factor arising from production of wood-fuel, Non-CO2 emission factor arising from production of alternative fuel NRB values as per IPCC values and approved PD		
ii Baseline emission parameters?	VVM	201	CO2 emission factor arising from use of biomass CO2 emission factor arising from use of alternative fuel Non-CO2 emission factor arising from use of biomass Non-CO2 emission factor arising from use of alternative fuel CO2 emission factor arising from production of wood-fuel CO2 emission factor arising from production of alternative fuel Non-CO2 emission factor arising from production of wood-fuel Non-CO2 emission factor arising from production of alternative fuel NRB	OK	OK
iii Leakage parameters?	VVM	201	Leakage effects are assessed every two years hence this has been scheduled for 2010	OK	OK



VERIFICATION REPORT GOLD STANDARD VER 01

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan?	VVM	201	The responsibilities and authorities for monitoring and reporting were reviewed from the established monitoring manual during the site visit – it however noted that although the manual identifies the parameters to be monitored but does not define the responsibilities	CL 1	OK
c Is the accuracy of equipment used for monitoring in accordance with the relevant guidance provided by the GS Requirement and are equipment controlled and calibrated in accordance with the monitoring plan?	VVM	204	N/A	OK	OK
i Are monitoring results consistently recorded as per approved frequency?	VVM	204	The Reports were verified for compliance to the Methodology during the site visit and concluded that the results were consistently recorded as per approved frequency Please justify why telephone number and address were not recorded.	OK CL 2	OK OK
ii Have quality assurance and quality control procedures been applied in accordance with the monitoring plan?	VVM	204	The employment of an expert 3rd party recommended by the methodology for monitoring is not clear from the availed report – The monitoring plan provides for the expert but their role from the monitoring report is only advisory, the explanation that ADES C02 Manager is not involved in sales activities does not demonstrate independence from other	CL 3	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			project activities e.g. Production. It was further noted that Although the monitoring report indicates that from 2010 on a certified independent auditor from Antanarivo, Madagascar, will verify the Sales Record together with the financial audit of ADES Madagascar – there was no contract that define the scope of responsibilities related to the Quality control procedures		
4 Assessment of data and calculation of greenhouse gas emission reductions					
It is assessed if GHG emission reductions achieved by / resulting from the proposed GS - VER project activity are calculated applying the selected methodology	VVM	206			
a Is a complete set of data for the specified monitoring period is available? (If no, i.e., only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall opt to either make the most conservative assumption theoretically possible in finalizing the verification report, or raise a request for deviation if appropriate).	VVM	207	The verification of the records was carried out during the site visit and a complete set of data for the specified monitoring period was available however there is need to indicate the relevant titles in the spread sheets in English as to make documents easy to understand in international communication e.g. Project stoves sales Record 2008 - 2009	CL 4	OK
b Has information provided in the monitoring report been cross-checked with other sources such as plant	VVM	207	The information provided in the monitoring report has been cross checked with the sales	OK	OK



VERIFICATION REPORT GOLD STANDARD VER 01

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
log books, inventories, purchase records, laboratory analysis?			records and delivery notes		
c Have calculations of baseline emissions, proposed GS - VER project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document?	VVM	207	The equations stipulated by the methodology have not been referenced in the monitoring report but only a reference to the page in the PDD is referenced. This is required in order to verify compliance to the methodology as well as to verify values for CO₂e reductions per stove year entered into the ER Calculator 'ER_per_Stove'!D13... formula differs from PDD and methodology Please clarify why By for Leakage F17,F18,K17,K18 is not zero "Adaptation for seasonal / weekend variation" is 92.3% for Charcoal and 90.9% for Wood. It differs from statement in PDD p17 "It is proposed to subtract from fuel use values measured in winter and on week-days 9.1% for charcoal users and 7.7% for wood fuel users (see Kitchen Survey Report)" as well as validation report section 4.3, please clarify the inconsistency. Please clarify why lower bound of confidence interval and seasonal/weekend variations have been considered twice both in determination of By and ER (per unit)	CAR 3	OK
				CAR 4	OK



VERIFICATION REPORT GOLD STANDARD VER 01

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d Have any assumptions used in emission calculations been justified?	VVM	207	Assumptions used in emission calculations been justified; drop off rate, NRB, kitchen tests, confidence level, adaptation for weekend variation, leakage are justified	OK	OK
e Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	VVM	207	NRB values, IPCC default values (2006) and validated claims are correctly applied	OK	OK
			"TAGE360(x;y)" should be "DAYS360(X;Y)"	CL 5	OK
5 GS Requirements					
a. Have the social and economic impact of the project been investigated biannually and an assessment made of its contribution, positive or otherwise, to sustainable development in the area?	GS		The following sustainability indicators are being monitored every two years: - Jobs created by ADES, Schools visited by ADES, Expenses for wood and charcoal – This was verified on site including a visit to some households and Schools as part of the verification process	OK	OK
			Please indicate how many positions are offered to locals	CL 6	OK
			Please provide some photos in the MR for those events organized by PP.	CL 7	OK
b. Are there any changes to the key sustainable development indicators?			There were no changes to the key sustainable development indicators	OK	OK
c. Were mitigation/compensation measures achieved and implemented according to the success indicators as			No negative Indicators were noted hence mitigation/compensation measures were not	OK	OK



VERIFICATION REPORT GOLD STANDARD VER 01

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
established in the monitoring plan(s)?			applicable		

Table 2 Resolution of Corrective Action / Clarification Requests / Forward Action from Validation Report.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CAR 1 - The project participant has operated the proposed GS VER project activity as per the registered PDD It was however noted that the PDD states that <i>"Avoidance of double counting / securing ownership; The stove buyers are informed that they are not allowed to make further money by marketing the stove as the added value is already included in the Sales price. Moreover, the stove owners sign a form, where it is mentioned that the rights on emissions reductions from the use of the stove are transferred to ADES"</i> however during the site visit the signing of the form by customers had not been done although the form with the rights had been developed	Table 1 – 1 (b)	PP 4-8-2010 In order to comply with CAR 2 ADES strives to collect until end of 2010 as many signatures as possible from customers, the Fokotany (village chairman) or mayor for stoves sold in 2008 and 2009. The warranty document or the sales contract is used to collect these signatures. For stove sales in 2008 signatures for a minimum of 50% of all sales in that year will be provided. For stove sales in 2009	DOE:12-8-2010 Please clarify the values chosen(50% and 60%), the drop off rate is 10% as per PDD DOE:17-9-2010 Does this mean that PP will still collect the signatures till 31 March 2011? DOE: 23-9-2010 Correction to reference data is now corrected hence CAR 1 is closed



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		signatures for a minimum of 60% of all sales in that year will be provided. PP 31-8-2010 ADES will collect until 31 March 2010 the required signatures from customers, the Fokotany (village chairman) or mayor for stoves sold in 2008 and 2009. The warranty document or the sales contract is used to collect these signatures. Considering the annual drop-off rate of 10% as mentioned in the PDD, the following percentages of signatures will be provided: For stove sales in 2008 signatures for a minimum of 81% of all sales in that year will be provided. For stove sales in 2009 signatures for a minimum of 90%	



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		of all sales in that year will be provided. PP 22-9-2010 The date as stated under PP 31-8-2010 is in the past and not correct. The correct date is 31 March 2011.	
CAR 2 - The monitoring plan and the applied methodology have been properly implemented and followed by the project participants it was however noted that the monitoring report provided extends beyond the Pre-registration period	Table 1 - 3 (a)	PP 4-8-2010 The first verification period has been adjusted to end at date of registration. The revised verification period is 01.01.2008 to 23.12.2009. Calculations for emission reductions have been revised accordingly in the project database and in the monitoring report. PP 31-8-2010 The verification period has been amended accordingly and covers	DOE:12-8-2010 Still not ok, GS requirements defines; 'Retroactive crediting' means the crediting of emission reductions that have occurred prior to the date of Gold Standard registration DOE:18-12-2010 From submitted version 03 of monitoring report and revised calculations, hence CAR 2 is closed



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		the period from 01.01.2008 to 22.12.2009. Emission reduction calculations have been revised accordingly. See monitoring report on page 14 and revised project database attached.	
CAR 3 - The equations stipulated by the methodology have not been referenced in the monitoring report. This is required in order to verify compliance to the methodology	Table 1 – 4 (c)	PP 4-8-2010 A reference to the equations used for emission reduction in the PDD calculation was inserted in the monitoring report on page 14.	DOE:12-8-2010 Reference to the Equations has now been made in the Monitoring Report hence CAR 3 is now Closed
CAR 4 'ER_per_Stove'!D13... formula differs from PDD and methodology Please clarify why By for Leakage F17,F18,K17,K18 is not zero "Adaptation for seasonal / weekend variation" is 92.3% for Charcoal and 90.9% for Wood. It differs from statement in PDD p17 "It is proposed to subtract from fuel use values measured in winter and on week-days 9.1% for charcoal users and 7.7% for wood fuel users (see Kitchen Survey Report)" as well as validation report section 4.3, please clarify the	ER spreadsheet	PP 01-4-2011 1) This is a mistake in the spreadsheet. Non-CO2-emissions must not be multiplied with Xnrb. This has been corrected in the spreadsheet in the cells D13, E13, F13, and I13, J13, K13. This has an impact on the value of ER per stove G10 and L10. Calculations of ER were revised accordingly. 2) This is a mistake in the spreadsheet in the cells F17, F18,	DOE: 02-4-2011 Closed after review of revised project database



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
inconsistency. Please clarify why lower bound of confidence interval and seasonal/weekend variations have been considered twice both in determination of By and ER (per unit)		F19 and K17, K18, K19. But this does not affect ER calculations. The error has been corrected in the spreadsheet. 3) This is a mistake in the PDD, page 17 and in the conclusion in the Kitchen survey report page 6. The adjustment factors for wood and charcoal clusters were mixed up. The correct adjustment factors are mentioned in the Kitchen Survey Report on page 4 and in the spreadsheet amounting to 92.3% for charcoal and 90.9% for wood cluster. 4) This is a mistake in the spreadsheet. The adjustment factors for lower bound of confidence level and seasonal/weekend variations have been counted twice. This error has been corrected in cells	



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		D12, D13, D14, in E12, E13, E14, in F12, F13, F14, in I12, I13, I14, in J12, J13, J14, and in K12, K13, K14, by calculating CO2 and non-CO2 emissions with “By” only (values in line 18 instead of line 17) without considering adjustment for lower bound of confidence level and seasonal/weekend variations. The adjustment factors are then considered when calculating total emissions per stove in line 10. This has an impact on ER per stove. Calculations of ER were revised accordingly (see Project Database and Monitoring Report page 14).	



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CL 1 - The responsibilities and authorities for monitoring and reporting were reviewed from the established monitoring manual during the site visit – it however noted that although the manual identifies the parameters to be monitored but does not define the responsibilities	Table 1 - 3 (b - iv)	PP 4-8-2010 The monitoring manual has been updated now including also the responsibilities for parameters monitored as well as the new sales contract and stove warranty templates (pp. 2-3; 7-8). PP 31-8-2010 The monitoring manual has been amended accordingly including the role of 3rd party audit and modalities (see page 3).	DOE: 12-8-2010 Monitoring manual does not describe the role of 3rd Party expert assessment in monitoring activity, the manual is also silent on modalities used to resolve any findings arising from the assessment DOE: 22-9-2010 OK closed



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CL 2 Please justify why telephone number and address were not recorded.	Project database	PP 01-4-2011 Phone number and address are required for bulk purchasers/retailers only and not for every stove user. In Madagascar there are no street names (except for main roads), which can be mentioned in the address. Therefore the address in the sales record consists of the region (e.g. Tuléar) and the domicile (e.g. name of the quarter/location, settlement or distinctive building. The monitoring sector mentioned in the sales record provides additional information on the geographical location of the household. The phone number is recorded under name in the sales record.	DOE: 02-4-2011 OK closed



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CL 3 – The employment of an expert 3rd party recommended by the methodology for monitoring is not clear from the availed report – The monitoring plan provides for the expert but their role from the monitoring report is only advisory, the explanation that ADES C02 Manager is not involved in sales activities does not demonstrate independence from other project activities e.g. Production	Table 1 - 3 (c - ii)	PP 4-8-2010 Please see the revised monitoring manual (pp. 2-3) with the responsibilities of 3rd parties for monitoring activities. The university of Fiaranantsoa is consulted for the reassessment of the NRB fraction. A external auditor (RAZAFIMAHAZO Hajanavalona Andriambelo, lot VP 44 Ankazotokana Ambony, Antananarivo 101, Madagascar) was assigned to do financial and sales audits for 2008 and 2009 (see copy of contract attached). This provides an independent 3rd party view on sales activities. External financial and sales audits will also be done in future years. PP 31-8-2010 Instead of a translated copy of the agreement, a copy of the audit report will be provided as soon as	DOE:11-8-2010 Please provide a “certified” translated copy of the agreement in English language DOE:23-9-2010 From review of expert CV and experts report of monitoring the CL 3 is now closed



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		it is available. PP 22-9-2010 A copy of the audit report has been provided to the DOE. Since not all stoves sold by ADES are counted for calculating emission reductions (ER) the total figures of stove sales in the audit report and in the monitoring report are not identical. Please find below explanations on how to interpret these figures (Please see the worksheets "Analysis_sales_0809" and "Not_counted_0809" in the file "1008_ADES_Project_Database_0809.xls"). Stove sales 2008: 1) solar box: In the audit report (page 6) a number 1459 stoves are mentioned. In the Project Database a number of 1365 stoves are listed. A number of 94	



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		(73+21) stoves are not counted for ER as stated in the worksheet "Not_counted_0809". 2) solar parabole: In the audit report (page 7) a number 67 stoves are mentioned. In the Project Database a number of 53 stoves are listed. A number of 14 (13+1) stoves are not counted for ER as stated in the worksheet "Not_counted_0809". 3) Stove yoyo: In the audit report (page 8) a number 117 stoves are mentioned. In the Project Database a number of 18 stoves are listed. A number of 99 stoves are not counted for ER as stated in the worksheet "Not_counted_0809". Stove sales 2009: 1) solar box: In the audit report (page 6) a number 621 stoves are mentioned. In the Project	



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		Database a number of 565 stoves are listed. A number of 56 stoves are not counted for ER as stated in the worksheet "Not_counted_0809". 2) solar parabole: In the audit report (page 7) a number 15 stoves are mentioned. In the Project Database a number of 13 stoves are listed. A number of 2 stoves are not counted for ER as stated in the worksheet "Not_counted_0809". 3) Stove yoyo: In the audit report (page 8) a number 0 stoves are mentioned. In the Project Database a number of 0 stoves are listed. Conclusion: The audit report confirms the sales figures as stated in the sales record and in the project database.	



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CL 4 – Please indicate relevant titles in the spread sheets in English as to make documents easy to understand in international communication e.g. Project stoves sales Record 2008 - 2009	Table 1 - 4 (a)	PP 4-8-2010 Titles in the sales record have been translated to English.	DOE:11-8-2010 Documents have been renamed and CL 4 is closed
CL 5 “TAGE360(x;y)” should be “DAYS360(X;Y)”	Monitoring report	PP 01-4-2011 We are working with the German Excel version and there the formula is called as mentioned. However, the English name of the formula was now added to the monitoring report, too (page 14).	DOE: 02-4-2011 Closed with submission of version 4 of MR
CL6 Please indicate how many positions are offered to locals	Monitoring report	PP 01-4-2011 All mentioned positions in MR are offered to locals. This has been added to the monitoring report (page 16).	DOE: 02-4-2011 Closed after review of version 4 of report



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CL 7 Please provide some photos in the MR for those events organized by PP.	Monitoring report	PP 01-4-2011 Photos of cooking demonstrations and school visits have been inserted in the monitoring report (pp. 17 & 18).	DOE: 02-4-2011 Closed after review of version 4 of report
FAR from validation: Any organisation donating any form of grant to ADES would have to declare that such grant is not linked to any quantity of VERs generated by the efficient stove project in Madagascar	Validation report	PP 4-8-2010 In the validation report page A-61 it is stated that: "DOE: 12.01.2009 Any organisation donating any form of grants to ADES would have to declare that such grant is not linked to any quantity of VERs generated by the efficient stove project in Madagascar. Especially, the "zugesi- cherte Spenden" would have to be officially de- clared as donations not re- lated to any quantity of off- set credits. This issue is for now considered resolved"	DOE:11-8-2010 This is FAR and has not been closed by DOE at validation, Please provide declaration that donation is not linked to VERs 22-9-2010 On basis of submitted declaration from the SDC and signed VERPA this FAR is closed



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		As listed in the annual report 2009 from ADES on page 26 (see copy attached or at http://www.adesolaire.org/de/vorstand.html) the following donations were received in 2009: • “freie Spenden”, meaning free donations • “zweckgebundene Spenden”, meaning earmarked donations • “Förderbeiträge”, meaning official development aid Explanations: Free donation is money that is available to ADES according to its articles of association. Free donations come from private persons or companies. These donations are not linked to any delivery of carbon credits or	



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Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		emission reductions. Earmarked donation is money that is available to ADES for a specific purpose, e.g. to buy a wood cutting machine or for working with schools. These donations are not linked to any delivery of carbon credits or emission reductions, but to the specific purpose defined by the donor. Official development aid is money from the Swiss Agency for Development and Cooperation (SDC). This money is must be used for conducting the solar and efficient stove project by ADES, but is not linked to any delivery of carbon credits or emission reductions (see copy of contract attached). PP 31-8-2010	



VERIFICATION REPORT GOLD STANDARD VER 01

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		Please find attached a declaration from the SDC that the donations (Förderbeiträge) are not linked to any delivery of carbon credits or emission reductions. Furthermore, there is a signed VERPA between ADES and myclimate (dated 13 May 2009), This contract guarantees that all emission reductions from this project are sold to myclimate, that ADES has full rights on emission reductions, and that ADES does not sell emission reductions from this project to any other party. If ADES would accept donations linked to the delivery of emission reductions, this would mean a breach of contract with myclimate.	