



Industrie Service

Validation Report

Klimaschutz e.V.

Validation of the “CDM Solar Cooker Project Aceh 1, Indonesia”

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TÜV Industrie Service GmbH TÜV SÜD Group
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Summary:				
<p>The Certification Body "Climate and Energy" of TÜV SÜD Industrie Service GmbH has been ordered by the German organisation Klimaschutz e.V., located in Bonn, Germany, to perform a validation of the above mentioned project.</p> <p>Using a risk based approach, the validation of this project has been performed by document reviews and on-site inspection, audits at the locations of the project and interviews at the offices of the project developer and the project owner.</p> <p>In summary, it is TÜV SÜD's opinion that the small scale CDM project "CDM SOLAR COOKER PROJECT ACEH 1, INDONESIA", as described in the final project design document of October 2005, meets all relevant UNFCCC requirements for the CDM, set by the Kyoto Protocol, the Marrakech Accords and relevant guidance by the CDM Executive Board and that the project furthermore meets all relevant host country criteria and correctly applies the baseline and monitoring methodology AMS-I.C.</p> <p>Hence, TÜV SÜD will recommend the "CDM SOLAR COOKER PROJECT ACEH 1, INDONESIA" for registration as CDM project activity by the CDM Executive Board.</p> <p>Prior to the submission of this validation report to the CDM Executive Board, TÜV SÜD will have to receive the written Letters of Approval by both involved parties, including confirmation by the DNA of Indonesia that the project assists the country in achieving sustainable development.</p> <p>Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reduction of 24 500 tonnes CO_{2e} over a crediting period of seven years, resulting in a calculated annual average of 3 500 tonnes CO_{2e}, represents a reasonable estimation using the assumptions given by the project documents.</p>				
Work carried out by:	<ul style="list-style-type: none"> • Thomas Kleiser (Project manager, GHG lead auditor, technical expert) • Michael Rumberg (GHG lead auditor) • Cristian Delamarian (Auditor Environmental Management Systems (ISO 14001), technical and local expert, GHG auditor) 			Internal Quality Control by: Werner Betzenbichler



Abbreviations

AE	Applicant Operational Entity
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
KP	Kyoto Protocol
MP	Monitoring Plan
PDD	Project Design Document
TÜV SÜD	TÜV Industrie Service GmbH TÜV SÜD Group
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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**Validation of the Small Scale CDM Project:
“CDM Solar Cooker Project ACEH 1, Indonesia”**

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Annex 1: Validation Protocol

Annex 2: Information Reference List



1 INTRODUCTION

1.1 Objective

Klimaschutz e.V. located in Bonn, Germany has commissioned TÜV Industrie Service GmbH TÜV SÜD Group (TÜV SÜD) to validate the small scale CDM project “CDM SOLAR COOKER PROJECT ACEH 1, INDONESIA”. The validation serves as a design verification and is a requirement of all CDM projects. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakech Accords.

1.2 Scope

The validation 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, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual, employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation 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 design.

The audit team has been provided with a draft PDD in April 2005. After a first document review (pre-check) and a first meeting in Munich a revised PDD was submitted in June 2005, which has been published in the Global Stakeholder Process. Based on this documentation an intensive document review and a fact finding mission in form of an on site audit has taken place. Afterwards the client decided to revise the PDD according to the CARs and CRs indicated in the audit process. The final PDD version submitted in October 2005 serves as the basis for the assessment presented herewith.

Studying the existing documentation belonging to this project, it was obvious that the competence and capability of the validation team has to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14000, EMAS)
- Quality assurance
- Technical aspects of solar cooking systems
- Monitoring concepts
- Political, economical and technical random conditions in host country



According to these requirements TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV certification body “climate and energy”:

Thomas Kleiser is project manager and lead auditor for CDM and JI projects at TÜV Industrie Service GmbH TÜV SÜD Group. In his position he is responsible for the implementation of verification and certifications processes for GHG mitigation projects. He has received extensive training in the CDM and JI validation processes and participated already in more than 30 CDM and JI project assessments.

Michael Rumberg is head of the division CDM/JI at TÜV Industrie Service GmbH TÜV SÜD Group. In his position he is responsible for the implementation of validation, verification and certifications processes for greenhouse gas mitigation projects in the context of the Kyoto Protocol. Before entering this company he worked as an expert for renewable energy, forestry, environmental issues, climate change and sustainability within the environmental branch of an insurance company. His competences are covering risk assessments, quality and environmental auditing (EMS auditor), baseline setting, monitoring and verification due to the requirements of the Kyoto Protocol.

Cristian Delamarian is a lead auditor for quality and environmental management systems (according to ISO 9001 and ISO 14001) at TÜV Philippines, Inc., TÜV SÜD Group in Manila. He is an acknowledged expert for electricity and heat generation project based on renewable sources world-wide. In his position he is responsible for the implementation of validation, verification and certifications audits for management systems. He has received extensive training in the CDM validation process and participated already in several CDM project in the South- and South-East Asian region.

The audit team covers the above mentioned requirements as follows:

- Knowledge of Kyoto Protocol and the Marrakech Accords (ALL)
- Environmental and Social Impact Assessment (ALL)
- Skills in environmental auditing (ALL)
- Quality assurance (ALL)
- Technical aspects of solar thermal technologies (ALL)
- Monitoring concepts (ALL)
- Political, economical and technical random conditions in host country (DELAMARIAN)

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body “climate and energy”:

- Werner Betzenbichler (head of the certification body “climate and energy”)



1.3 GHG Project Description

The project aims to supply about 1000 households in the district of Sabang Islands/Aceh, Indonesia and in the city of Badar in Aceh Tenggara, Indonesia with solar cookers of the type K14 and herewith to reduce the consumption of non-renewable firewood and to avoid a further deforestation in the Aceh region.

Project participants are Klimaschutz e.V., Germany and PT Petromat Agrotech, Indonesia. Thus two Letters of Approval (LoA) are required for this project, a LoA issued by the DNA of Germany (country of the sponsor) and a LoA issued by the DNA of Indonesia as host country.

The project starting date is January 1st, 2006 and also the (first) 7 year non renewable crediting period starts January 1st, 2006.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual (for further information see www.vvmanual.info), an initiative of all Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a validation protocol was customised for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, 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 CDM project 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 Figure 1.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Validation report.	Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent Validation process.

Validation Protocol Table 2: Requirement checklist				
Checklist Question	Reference	Means of verification	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in seven different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	(MOV) Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification is used when the validation team has identified a need for further clarification.

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Validation conclusion
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".

Figure 1 Validation Protocol Tables

2.1 Review of Documents

The project design document submitted by the client and additional background documents related to the project design and baseline were reviewed. A complete list of all documents reviewed is attached as annex 2 to this report. The project design document underwent several

revisions addressing clarification requests issued by TÜV SÜD. The audit team has been provided with a draft PDD in April 2005. The revised final PDD version submitted in October 2005 serves as the basis for the assessment presented herewith.

2.2 Follow-up Interviews

In the period of August 29th – 30th, 2005, TÜV SÜD performed interviews with project participants and stakeholders in Jakarta, Indonesia to confirm selected information and to resolve issues identified in the document review. Representatives of Klimaschutz e.V., Germany and PT. Petromat Agrotech, Indonesia as well as representatives of the Aceh Parliament and of the Indonesian Ministry of Energy were interviewed. The main topics of the interviews are summarised in Table 1.

Table 1 Interview topics

Interviewed organisation	Interview topics
Klimaschutz e.V., Germany and PT. Petromat Agrotech, Indonesia	<ul style="list-style-type: none"> ➤ Project design ➤ Technical equipment ➤ Sustainable development issues ➤ Baseline determination ➤ Additionality ➤ Crediting period ➤ Monitoring plan ➤ Management system ➤ Environmental impacts ➤ Stakeholder process ➤ Approval by the host and investor country
Ministry of Energy, Indonesia and members and representatives of Aceh Parliament, Indonesia	<ul style="list-style-type: none"> ➤ Project design ➤ Sustainable development issues ➤ Additionality ➤ Environmental impacts ➤ National criteria for CDM projects ➤ Approval by the host country



2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communications between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses given are summarised in chapter 3 below and documented in more detail in the validation protocol in annex 1.



3 VALIDATION FINDINGS

In the following sections the findings of the validation are stated. The validation findings for each validation subject are presented as follows:

- 1) The findings from the desk review of the project design documents and the findings from interviews during the follow up visit are summarised. A more detailed record of these findings can be found in the Validation Protocol in annex 1.
- 2) Where TÜV SÜD had identified issues that needed clarification or that represented a risk to the fulfilment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in annex 1. The validation of the project resulted in 2 Corrective Action Requests and 3 Clarification Request.
- 3) Where Clarification or Corrective Action Requests have been issued, the exchanges between the client and TÜV SÜD to resolve these Clarification or Corrective Action Requests is summarised.
- 4) The conclusions for validation subject are presented.

The validation findings relate to the project design as documented and described in the final project design documentation.

3.1 Project Design

3.1.1 Discussion

The project participants are Klimaschutz e.V., Germany and PT. Petromat Agrotech, Indonesia. Both participating Parties, Indonesia as the host Party and Germany as the Annex I Party, meet all relevant participation requirements. The project currently has not received written Letters of Approval by the involved parties. The positive validation opinion in this validation Report is one of the requirements for issuing the letter of Approval for both involved parties.

The objective of the project is to reduce GHG emissions by supplying households with solar cookers for renewable heat generation and to reduce the consumption of firewood as non-renewable biomass.

The project itself does qualify as a Small Scale Project as it fulfils the requirements defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM by being a project in the category i) “renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts”. The project activity itself is not a debundled component of a larger project activity according to the rules for “determining the occurrence of debundling” as they are outlined in Appendix C of the Simplified Modalities and Procedures for Small-Scale CDM project activities. Currently there is no other small scale project activity already registered or in the process of applying for registration - done by the same project participant within one kilometer distance.

The project design engineering does reflect current good practices. Via feasibility studies carried out in advance to the project implementation and on basis of the experiences with the applied technology in other countries the appropriateness of the employed technology could be confirmed retrospectively and plausibly.

The project is hence professionally managed and the applied technology represents state of the art technique in this sector of renewable energy.

The project equipment can be expected to run for the whole project period and it can not be expected that it will be replaced by more efficient technologies.

The project leads to a technology and knowledge transfer to the host country as the project makes, on the one side, use of an existing technology but on the other side this technology currently is (unless in some isolated pilot projects) not used (and known) in Indonesia and especially not in this region of the country. As in the context of the project local people are trained in this technology and the end-fabrication will be carried out in Aceh there is an impulse and incentive to use this technology more wide-spread in future.

As Indonesia has the objective to make use of renewable energy sources the project is in line with sustainable development policies of the country according to the information received during the on-site audit.. The contribution of the project to sustainable development has to be confirmed by the Indonesian DNA in the written Letter of Approval.

The project has not to obtain project-specific permissions and licences for implementation and operation of the solar cookers. All local stakeholders and the involved regional and national authorities have confirmed the assistance for the project verbally and in written form. An environmental impact assessment is not required for this project.

The funding for the project does not lead to a diversion of official development assistance as according to the information obtained by the audit team ODA does not contribute to the financing of the project.

The starting date as well as the operational lifetime are clearly defined and also handled in a reasonable manner. The crediting period is with (3x) seven years clearly defined.

3.1.2 Findings

Corrective action Request No. 1:

Written signed Letters of Approval of both involved countries, Germany and Indonesia, have to be submitted to the validator before starting the registration process for this project.

Response:

A positive validation opinion in this validation report is one of the preconditions for issuing the signed written Letter of Approval for both involved parties. The LoAs will be submitted to the validator before starti

Clarification Request No. 1:

Further information concerning the knowledge and experiences of the persons involved in the project with the technology have to be submitted to the validator.

Response:

The required additional information has been submitted to the validator.

3.1.3 Conclusion

After receipt of the written LOAs the project will comply with all requirements.



3.2 Baseline and Additionality

3.2.1 Discussion

The project confirms with the small scale CDM project category I.C. “Thermal Energy for the user” to a large extent. The project applies the approved baseline and monitoring methodology AMS-I.C. But the baseline has to be elaborated more detailed and used data / assumptions have to be evidenced more clearly.

The PDD describes that the project is not a likely baseline scenario according to various barriers faced by the project. The technological, investment and cultural barriers argued by the project participants could be verified during the on site audit in various discussions and interviews with local and state representatives. Without CDM this project would not be feasible. The CDM revenue was considered in the project from the very beginning of the project development. The respective agreements have been verified during the assessment process.

The application of the baseline methodology is transparent and conservative, but has to be elaborated more detailed. The chosen approach should be explained more substantiated.

Relevant national policies have been taken into account as the energy policy of the Government of Indonesia. The project is in line with the energy policy in Indonesia.

3.2.2 Findings

Clarification Request No. 2:

The discussion and determination of the chosen baseline and the applied values (for example: efficiency of traditional wood consumption/ data sources/ assumptions to estimate the emission reductions (for example operating hours) have to be worked out more detailed. Further evidenced data material has to be submitted to the validator.

Response:

The required additional more detailed and substantiated information has been submitted to the validator and is included in the final PDD.

3.2.3 Conclusion

The project does comply with the requirements.

3.3 Monitoring Plan

3.3.1 Discussion

The selected monitoring methodology (approved baseline and monitoring methodology AMS-I.C) is in line with the monitoring methodologies provided for the relevant project category as the Simplified Modalities and Procedures for Small-Scale CDM project activities under (c) ask for (i) Recording annually the number of systems operating and (ii) Estimating the annual hours of operating of an average system, if necessary, using survey methods. This is the fact in the existing project. Nevertheless the monitoring methodology and system has to be elaborated more detailed.

No indicators have been defined regarding project emissions and leakage emissions to be monitored according to the monitoring plan as there are no emissions to be expected in the regular operation of the plant.

The responsibility of the project management is clearly described to a wide extent. During the visit on site, the validator was able to discuss the practical implementation on site.

Initial training is required and already scheduled for the project.

3.3.2 Findings

Clarification Request No. 3:

The monitoring concept and system has to be elaborated more detailed. The criteria for a successful implementation of the monitoring plan have to be worked out in detail.

Response:

The required more detailed additional information has been submitted to the validator and is included in the final PDD and illustrated in further submitted documentation.

3.3.3 Conclusion

The project does comply with the requirements.

3.4 Calculation of GHG Emissions

3.4.1 Discussion

The PDD does clearly define the project's spatial boundaries. The PDD does also correctly define the project's system boundaries. Thus, all components used to mitigate GHG's are covered. Information regarding the number of installed solar cookers is supported by corresponding documentation.

No project scenario emissions are to be expected. No leakage emissions will appear and thus no leakage emissions need to be calculated.

Concluding it can be stated that all aspects related to direct and indirect baseline emissions are captured in the project design.

The calculations of the baseline emission are documented in a complete and transparent manner. Hereby, conservative figures have been used.

3.4.2 Findings

There are no findings.

3.4.3 Conclusion

The project does comply with the requirements.



3.5 Environmental Impacts

3.5.1 Discussion

An analysis of the environmental impacts of the project activity is not required according to Indonesian legislation. The project does comply with environmental legislation.

Environmental effects are addressed in the PDD. It is not expected that the project will cause any negative environmental effects.

3.5.2 Findings

There are no findings.

3.5.3 Conclusion

The project does comply with the requirements.

3.6 Comments by Local Stakeholders

3.6.1 Discussion

There is no legislation in Indonesia to carry out a Stakeholder Process for such projects. Furthermore currently there is no guidance how to conduct such a process.

Nevertheless the project participants published the projects in a local newspaper already in the end of 2004 and presented the project to local stakeholders in 2005 several times according to the information received during the on-site audits. But this process still has to be demonstrated more detailed.

So there have been sufficient possibilities for local stakeholders to comment on the project.

All comments received have been neutral or positive. Information concerning the comments has to be submitted to the validator.

3.6.2 Findings

Corrective Action No. 2:

The received comments on the project by local and regional stakeholders as well as state authorities have to be submitted to the validator.

Response:

The required information has been submitted to the validator via additional documentation (meeting minutes and letters with comments).

3.6.3 Conclusion

The project does comply with the requirements.



4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on its website from July 9th, 2005 and invited comments within 30 days, until August 8th, 2005 by Parties, stakeholders and non-governmental organisations.

No comments have been received.

The PDD has been publicly available under the following link:

http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=965&Ebene1_ID=26&Ebene2_ID=223&mode=1.

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the “CDM SOLAR COOKER PROJECT ACEH 1, INDONESIA” in Indonesia. The validation was performed on the basis of UNFCCC criteria and host country criteria, 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 modalities and procedures and subsequent decisions by the CDM Executive Board.

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project does meet all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by TÜV SÜD for registration with the UNFCCC under the CDM after the receipt of the written Letters of Approval by both involved Parties.

By supplying about 1000 households with solar cookers, the projects leads to a remarkable reduction of the consumption of non-renewable firewood and contributes to avoid further deforestation in Aceh region of Indonesia. Thus the project results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the described investment, technological and also cultural barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions. Without CDM this project would not be feasible.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 24 500 tonnes CO_{2e} over a crediting period of seven years, resulting in a calculated annual average of 3 500 tonnes CO_{2e}, represents a reasonable estimation using the assumptions given by the project documents.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 2005-12-23

Munich, 2005-12-23

A blue ink signature, appearing to be 'W. Betzenbichler', written in a cursive style.

Werner Betzenbichler

Head of certification body “climate
and energy“

A blue ink signature, appearing to be 'Thomas Kleiser', written in a cursive style.

Thomas Kleiser

Project Manager



Industrie Service

Annex 1

Final Validation Protocol

Table 1: Mandatory Requirements for Small Scale Clean Development Mechanism (CDM) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art. 12.2	See below	Table 2, Section E.4.1
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	CAR 1 (see also comments under requirement No. 4)	Table 2, Section A.3. The contribution to sustainable development in the host country has to be confirmed by the host country in the written Letter of Approval (LoA).
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art. 12.2.	See below	Table 2, Section E.4.1
4. The project shall have written approval of voluntary participation from the designated national authorities of each party involved	Kyoto Protocol Art. 12.5a, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	CAR 1	The project has not yet received a written Letter of Approval (LoA) by both involved parties, Germany as country of the investor and Indonesia as host country. Both countries already have verbally announced the positive appreciation of the project and their willingness to assistance the project participants in the transformation process for this project. But a positive validation opinion is one



REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
			<p>of the requirements for issuing a written Letter of Approval (LoA). <u>Corrective Action Request No. 1 (CAR 1):</u> Written signed Letters of Approval of both involved countries, Germany and Indonesia, have to be submitted to the validator before starting the registration process for this project.</p>
5. The emission reductions should be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	See below	Table 2, Section E.1 to E.4
6. Reduction in GHG emissions must be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Kyoto Protocol Art. 12.5.c, Simplified Modalities and Procedures for Small Scale CDM Project Activities §26	See below	Table 2, Section B.2.1
7. Potential public funding for the project from Parties in Annex I shall not be a diversion of official development assistance	Marrakech Accords (Decision 17/CP.7)	☑	The funding for the project does not lead to a diversion of official development assistance as according to the information obtained by the audit team ODA does not contribute to the financing of the project.



REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
8. Parties participating in the CDM shall designate a national authority for the CDM	Marrakesh Accords (CDM modalities§ 29)	☑	<p>Germany as well as Indonesia have established a designated national authority.</p> <p>The nominated German DNA is:</p> <ul style="list-style-type: none"> • Federal Ministry for the Environment, Nature Conservation and Nuclear Safety 11055 Berlin, Germany, Mr. Franzjosef Schafhausen, (Franjosef.Schafhausen@bmu.bund.de), and Thomas Forth, (Thomas.Forth@bmu.bund.de) Phone: (49-30)28 550-2350/2357 Fax: (49-30) 28 550-2349 <p>The nominated Indonesian DNA is:</p> <ul style="list-style-type: none"> • National Commission on CDM (KOMNAS MPB) JI.DI. Panjaitan, Kebon Nanas JAKARTA 13410 Kotak Pos/PO Box 7777 JAT 13000 Ms. Masnellyarti Hilman Head, National Commission of the CDM Phone: (21-85) 80067-69, 8517148 Fax: (21-85) 18135, 8517 147
9. The host country shall be a Party to the Kyoto Protocol	Marrakesh Accords (CDM modalities§ 30)	☑	Indonesia is a Party to the Kyoto Protocol and has ratified the Protocol at December 12 th , 2004.



REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
10. The proposed project activity shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakesh Accords and shall not be a debundled component of a larger project activity	Simplified Modalities and Procedures for Small Scale CDM Project Activities §12a,c	See below	Table 2, Section A.1
11. The project design document shall conform with the Small Scale CDM Project Design Document format	Simplified Modalities and Procedures for Small Scale CDM Project Activities, Appendix A	☑	The project design document does conform with the Small Scale CDM Project Design Document format (version 01) valid by time of submission of the PDD.
12. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and uses the simplified baseline and monitoring methodology for that project category	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	See below	Table 2, Section A.1.3 and B.1
13. Comments by local stakeholders are invited, and a summary of these provided	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22b	See below	Table 2, Section G
14. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c	See below	Table 2, Section F
15. Parties, stakeholders and UNFCCC accredited NGOs have been invited to comment on the validation requirements and comments have been made publicly available	Simplified Modalities and Procedures for Small Scale CDM Project Activities §23b,c,d	☑	A global public stakeholder process on the UNFCCC website has taken place from July 9 th , 2005 to August 8 th , 2005 for 30 days. No comments on the project have been received.



Industrie Service

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
			PDD and comments for the Global Stakeholder Process are public available under the link: http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=965&Ebene1_ID=26&Ebene2_ID=223&mode=1 .



Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. Project Description The project design is assessed.					
A.1. Small scale project activity It is assess whether the project qualifies as small scale CDM project activity.					
A.1.1. Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	1-8	DR, I	The project itself does qualify as a Small Scale Project as it fulfils the requirements defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM by being a project in the category Type-1 i) “renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. The small scale project activity is not a debundled component of a larger project activity?	1-8	DR, I	The project activity is not a debundled component of a larger project activity according to the rules for “determining the occurrence of debundling” as they are outlined in Appendix C of the Simplified Modalities and Procedures for Small-Scale CDM project activities. Currently there is no other small scale project activity already registered or in the process of applying for registration - done by the same project participant and less than 1km far from this project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A.1.3. Does proposed project activity confirm to one of the project categories defined for small scale CDM project activities?	1-8	DR, I	No, the project confirms with the project category I.C. "Thermal energy for the user" Electricity generation by the user" as ASM I.C ask for renewable energy technologies that supply individual households or users with thermal energy that displaces fossil fuels or non-renewable sources of biomass". This is exactly what the project aims.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2. Project Design Validation of project design focuses on the choice of technology and the design documentation of the project.					
A.2.1. Are the project's spatial (geographical) boundaries clearly defined?	1-8, 30, 31	DR, I	Yes, the PDD does clearly define the project's spatial boundaries. The project boundaries comprise the Sabang Islands in the north of Aceh and the City of Badar in Aceh Tenggara.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2. Are the project's system (components and facilities used to mitigate GHG's) boundaries clearly defined?	1-8, 30, 31	DR, I	Yes, the PDD does define the project's system boundaries by description of the project components. All components used to mitigate GHG's are covered.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A.2.3. Does the project design engineering reflect current good practices?	1-13, 15 – 19, 25	DR, I	<p>Yes, the project design engineering does reflect current good practices. The project is, hence, professionally managed. The technical experts involved in the project and responsible for a successful (technical) implementation of the project, Mr. Dieter Seifert in Germany and Mr. Rudi Wahyudi as local representative and responsible person can refer to experiences of more than 20 years in this field of technology.</p> <p>Clarification Request No. 1:</p> <p>Nevertheless further information concerning the knowledge and experiences of the persons involved in the project have to be submitted to the validator.</p>	CR 1	<input checked="" type="checkbox"/>
A.2.4. Will the project result in technology transfer to the host country?	1-8, 27 - 29	DR, I	<p>Yes, The technology is transferred from Germany by providing the knowledge and prefabricated solar cooker kits and by propagation of technology for cooking by retained heat. The cookers are built locally under the supervision of the local specialists trained by German trainers. Future local production of solar cookers of a result of the knowledge and technology transfer of this project is possible.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.5. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period? Does the project make provisions for meeting training and maintenance	1-7	DR, I	<p>Yes, for the starting phase of the project extensive training is required. First presentations and trainings for the future users already have been conducted according to the information given during the on-site audits and confirmed by submitting ad-</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
needs?			ditional documentation (meeting with future users) as attachment to the PDD). Elected local representatives (exposed local religious and political persons) will supervise the users on-site and thus contribute to the access of the project. Both project participants, Klimaschutz e. V. in Germany and PT Petromat Agrotech in Indonesia will be responsible for maintenance and delivery of spare parts if required. Furthermore periodic reviews are envisaged to guarantee the success of the project.		
A.3. Contribution to Sustainable Development The project's contribution to sustainable development is assessed					
A.3.1. Will the project create other environmental or social benefits than GHG emission reductions?	1-7, 27-29	DR, I	Yes. It is planned to train and employ about ten local people in this project for the end-fabrication of the (currently already in Germany pre-fabricated) solar-cookers. This will create additional income for their families. Furthermore the project will lead to a remarkable reduction of fuel wood consumption from the surrounding forests and contribute to avoid deforestation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.2. Will the project create any adverse environmental or social effects?	1-7,	DR, I	The project is expected to create no adverse environmental or socio-economic effects.		<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A.3.3. Is the project in line with sustainable development policies of the host country?	1-7, 22-25, 29, 30, 31	DR, I	<p>Yes, according to the results of the interviews during the on-site audits.</p> <p>As Indonesia has the objective - documented by several official political statements- to make use of renewable energy sources and confirmed in the on-site interviews with political representatives and state authorities, the project is in line with sustainable development policies of the country.</p> <p>This has to be confirmed by the Letter of Approval which will be issued by the Indonesian DNA (see CAR 1).</p> <p>Furthermore the project has obtained diverse assistance and endorsement by all relevant political representatives in the region. This could be confirmed by interviews with local political leaders and furthermore by submitted additional documentation concerning assistance by local representatives in addition to the on-site results.</p>	CAR 1	
A.3.4. Is the project in line with relevant legislation and plans in the host country?	1-6, 22-25	DR, I	<p>Yes. The project is in line with Indonesia's legislation for sustainable development.</p> <p>This has to be confirmed by the Letter of Approval which will be issued by the Indonesian DNA (see CAR 1).</p>	CAR 1	



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			According to the type and character of the project an environmental impact assessment is not required.		
B. Project Baseline The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. Baseline Methodology It is assessed whether the project applies an appropriate baseline methodology.					
B.1.1. Is the selected baseline methodology in line with the baseline methodologies provided for the relevant project category?	1-6, 18-22	DR, I	Yes, see comment under A.1.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.1.2. Is the baseline methodology applicable to the project being considered?	1-6	DR, I	Yes, see comment under A.1.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<p>B.2. Baseline Determination</p> <p>It is assessed whether the project activity itself is not a likely baseline scenario and whether the selected baseline represents a likely baseline scenario.</p>					
<p>B.2.1. Is it demonstrated that the project activity itself is not a likely baseline scenario due to the existence of one or more of the following barriers: investment barriers, technology barriers, barriers due to prevailing practice or other barriers?</p>	1-6	DR, I	The PDD describes correctly, transparently, plausibly and re-traceably that the project is not a likely baseline scenario according to various barriers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>B.2.2. Is the application of the baseline methodology and the discussion and determination of the chosen baseline transparent and conservative?</p>	1-6, 17	DR, I	<p>Yes. The project uses the approved baseline methodology AMS-I.C. and the discussion, determination and application is transparent and conservative.</p> <p>The reported and discussed (during the on-site audits) barriers such as investment, technological and cultural barriers are retraceable and have been confirmed by all interviewed persons during the on-site mission. Without CDM such a project in a transformation as designed in this project is not feasible.</p> <p>The CDM revenue was considered in the projects from the very beginning. The respective financial calculations have been verified during the assess-</p>	CAR 2	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			ment process and could be confirmed by further documentation. Clarification Request No. 2: Nevertheless the discussion and determination of the chosen baseline and the applied values/ data sources /assumptions to estimate the emission reductions have to be worked out more detailed. Further evidenced data material has to be submitted to the validator.		
B.2.3. Are relevant national and/or sectoral policies and circumstances taken into account?	1-6, 22-25	DR, I	Yes, relevant sectoral policies have been taken into account.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.4. Is the baseline selection compatible with the available data?	1-6, 22-25	DR, I	The baseline is based on approaches from the methodology the PDD refers to and hence considered being from a reliable source.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.5. Does the selected baseline represent the most likely scenario describing what would have occurred in absence of the project activity?	1-6, 25, 26	DR, I	Yes. This is demonstrated plausibly in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
C. Duration of the Project / Crediting Period It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and operational lifetime clearly defined?	1-7	DR, I	The starting date defined in the PDD does comply with the information the audit team obtained on site. The operational lifetime of 21 years as defined in the PDD is considered to be plausible given the applied equipment. Furthermore it is ensured that in case of damaged or lost equipment repair or substitution will be provided as soon as possible. Furthermore the issue of disposability and applicability of the equipment is also part of the monitoring plan.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.1.2. Is the crediting period clearly defined (seven years with two possible renewals or 10 years with no renewal)?	1-7	DR, I	Yes. The project uses a (3x) 7 years crediting period. The starting date of the first crediting period is January 1 st , 2006.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.1.3. Is it assured that in case the start of the crediting period is before the registration of the project that the project activities starting date falls in the period between 1 January 2000 and the registration of the first clean development mechanism project?	1-7	DR, I	This issue is out of relevance for the existing project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<p>D. Monitoring Plan</p> <p>The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.</p>					
<p>D.1. Monitoring Methodology</p> <p>It is assessed whether the project applies an appropriate monitoring methodology.</p>					
D.1.1. Is the selected monitoring methodology in line with the monitoring methodologies provided for the relevant project category?	1-6, 8, 9, 18-22	DR, I	Yes, the selected monitoring methodology is in line with the monitoring methodologies provided for the relevant project category.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Is the monitoring methodology applicable to the project being considered?	1-6	DR, I	Yes, the monitoring methodology is applicable to the project being considered.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Is the application of the monitoring methodology transparent?	1-6	DR, I	Yes, the application of the monitoring methodology is transparent, practicable and well developed.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Will the monitoring methodology give opportunity for real measurements of achieved emission reductions?	1-6	DR, I	A direct measurement of emission reductions is not possible. But the application of the chosen monitoring methodology (monitoring of number of solar cookers in operation, operation time of the solar cookers) allow (in combination with further parameters based on default values or derived conservatively) a realistic and conservative determination of the achieved emission reductions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.2. Monitoring of Project Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Are the choices of project emission indicators reasonable?	1-6	DR, I	No project emissions are evident in the project as the solar cookers will not produce any emissions. The thermal energy is produced completely using the sun as renewable energy source.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Will it be possible to monitor / measure the specified project emission indicators?	1-6	DR, I	See above in D.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.3. Do the measuring technique and frequency comply with good monitoring practices?	1-6	DR, I	See above in D.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.4. Are the provisions made for archiving project emission data sufficient to enable later verification?	1-6	DR, I	See above in D.2.1		<input checked="" type="checkbox"/>
D.3. Monitoring of Leakage It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
D.3.1. If applicable, are the choices of leakage indicators reasonable?	1-6	DR, I	No leakage is evident in the project according to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.3.2. If applicable, will it be possible to monitor / measure the specified leakage indicators?	1-6	DR, I	See above in D 3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.3. If applicable, do the measuring technique and frequency comply with good monitoring practices?	1-6	DR, I	See above in D 3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.4. If applicable, are the provisions made for archiving leakage data sufficient to enable later verification?	1-6	DR, I	See above in D 3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4. Monitoring of Baseline Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.4.1. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	1-6, 20, 21	DR, I	According to the applied methodology baseline emissions can be easily calculated ex post by monitoring the actual number of solar cookers in operation and the mean operating time of these solar cookers. The choice of the baseline indicators this is reasonable and practicable. Clarification Request No. 3: The monitoring concept has to be elaborated more detailed. The criteria for a successful implementation of the monitoring plan have to be worked out in detail.	CR 3	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.4.2. Will it be possible to monitor / measure the specified baseline emission indicators?	1-6, 7, 10, 11-13, 15, 19-21	DR, I	Yes, see explanation above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.3. Do the measuring technique and frequency comply with good monitoring practices?	1-6, 20, 21	DR, I	Yes, there is a well developed monitoring system with concrete defined responsibilities and tasks.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.4. Are the provisions made for archiving baseline emission data sufficient to enable later verification?	1-6, 21	DR, I	Yes respective provisions have been submitted to the audit team (see also information given above).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5. Project Management Planning It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
D.5.1. Is the authority and responsibility of project management clearly described?	1-6, 21	DR, I	Yes, the authority and responsibility of the project management is clearly described in chapter D.1 in the main.	CAR 4	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			<p>Clarification Request No. 4: The project management and the responsibilities in the project have to be described and elaborated more detailed.</p>		
D.5.2. Is the authority and responsibility for registration monitoring measurement and reporting clearly described?	1-6	DR, I	Yes, the authority and responsibility of the project management is so far clearly described (but see also comment above).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.3. Are procedures identified for training of monitoring personnel?	1-6	DR, I	<p>Yes. A project-specific training of the monitoring personal is required. Chapter D.1. describes in detail the proceeding to carry out this training. The first six month after project starting are foreseen for trainings and learning by doing.</p> <p>Clarification Request No. 3: The training concept and the responsibilities for training have to be elaborated more detailed.</p>	CAR 3	<input checked="" type="checkbox"/>
D.5.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	1-6, 28, 29	DR, I	No emergency situation with unintended emission has to be expected.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.5. Are procedures identified for calibration of monitoring equipment?	1-6	DR, I	No such calibration is required for the applied monitoring methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.6. Are procedures identified for maintenance of monitoring equipment and installations?	1-6	DR, I	Not applicable for the applied monitoring methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.5.7. Are procedures identified for monitoring, measurements and reporting?	1-6	DR, I	Yes, there is a well-developed and detailed monitoring plan and system.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	1-6	DR, I	Yes. According to the information in the PDD and confirmed by several interviews the users have to agree to	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	1-6	DR, I	Yes, see for this purpose detailed information on page 17 of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.10. Are procedures identified for internal audits of GHG project compliance with operational requirements as applicable?	1-6	DR, I	Yes. According to the information given in the PDD, during the on-site audits and in the further submitted documents procedures identified for internal audits of GHG project compliance with operational requirements (at least internal audits, reviews once in half a year).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.11. Are procedures identified for project performance reviews?	1-6	DR, I	Yes, see information above and information given in chapter D.1. of the final PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.12. Are procedures identified for corrective actions?	1-6	DR, I	Yes, see information above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E. Calculation of GHG emission It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. Project GHG Emissions The validation of predicted project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect project emissions captured in the project design?	1-6, 20, 21	DR, I	There are no project emissions in this project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.2. Have all relevant greenhouse gases and sources been evaluated?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.3. Do the methodologies for calculating project emissions comply with existing good practice?	1-6	DR, I	See E.1.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4. Are the calculations documented in a complete and transparent manner?	1-6	DR, I	See E.1.3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.5. Have conservative assumptions been used?	1-6	DR, I	See E.1.3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.6. Are uncertainties in the project emissions estimates properly addressed?	1-6	DR, I	See E.1.3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.2. Leakage It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.					
E.2.1. Are leakage calculation required for the selected project category and if yes, are the relevant leakage effects assessed?	1-6	DR, I	No leakage is evident in the project according to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.2. Are potential leakage effects properly accounted for in the calculations (if applicable)?	1-6	DR, I	See above in E.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.3. Do the methodologies for calculating leakage comply with existing good practice (if applicable)?	1-6	DR, I	See above in E.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.4. Are the calculations documented in a complete and transparent manner and (if applicable)?	1-6	DR, I	See above in E.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.5. Have conservative assumptions been used (if applicable)?	1-6	DR, I	See above in E.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.6. Are uncertainties in the leakage estimates properly addressed (if applicable)?	1-6	DR, I	See above in E.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.3. Baseline GHG Emissions The validation of predicted baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Are the baseline emission boundaries clearly defined and do they sufficiently cover sources for baseline emissions?	1-6, 7	DR, I	The application of the baseline methodology is correct.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.2. Are all aspects related to direct and indirect baseline emissions captured in the project design?	1-6	DR, I	Yes, all aspects related to direct and indirect baseline emissions are captured in the project design.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.3. Have all relevant greenhouse gases and sources been evaluated?	1-6	DR, I	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.4. Do the methodologies for calculating baseline emissions comply with existing good practice?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.5. Are the calculations documented in a complete and transparent manner?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.6. Have conservative assumptions been used?	1-6	DR, I	Yes..	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.7. Are uncertainties in the baseline emissions estimates properly addressed?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.4. Emission Reductions Validation of baseline GHG emissions will focus on methodology transparency and completeness in emission estimations.					
E.4.1. Will the project result in fewer GHG emissions than the baseline case?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F. Environmental Impacts It is assessed whether environmental impacts of the project are sufficiently addressed.					
F.1.1. Does host country legislation require an analysis of the environmental impacts of the project activity?	1-6, 17, 22-23	DR, I	According to the information in the PDD and confirmed during the on-site audits (interview with state and political representatives) the project activity does not require any EIA study.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2. Does the project comply with environmental legislation in the host country?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.3. Will the project create any adverse environmental effects?	1-6	DR, I	No, the project shall not create any adverse environmental Impacts.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.4. Have environmental impacts been identified and addressed in the PDD?	1-6	DR, I	Yes the environmental aspects have been discussed in the PDD and during the on-site audits.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
G. Comments by Local Stakeholder					
Validation of the local stakeholder consultation process.					
G.1.1. Have relevant stakeholders been consulted?	1-6, 17, 22-24, 28	DR, I	According to the national legislation a stakeholder process is not required for such projects. Nevertheless the project concept has been published via newspaper on December 18 th , 2004. Thus there was a possibility to get informed about the project and to comment on the project. Furthermore the project was presented directly and personally and discussed with all relevant local and regional stakeholders several times, at last in September 2005.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	1-6	DR, I	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.3. 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?	1-6	DR, I	A stakeholder consultation process is not required according to Indonesian legislation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
G.1.4. Is a summary of the comments received provided?	1-6	DR, I	No, but positive comments have been received. <u>Corrective Action No. 2:</u> The received positive comments on the project by local and regional stakeholders as well as state authorities have to be submitted to the validator.	CAR 2	<input checked="" type="checkbox"/>
G.1.5. Has due account been taken of any comments received?	1-6	DR, I	All comments received so far are positive.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Table 3 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
<p><u>Corrective action Request No. 1:</u> Written signed Letters of Approval of both involved countries, Germany and Indonesia, have to be submitted to the validator before starting the registration process for this project.</p>	<p>Table 1, Requirements No. 2 and No. 4</p>	<p>The LoAs will be submitted to the validator before starting the registration process.</p>	<p><input checked="" type="checkbox"/></p>
<p><u>Clarification Request No. 1:</u> Nevertheless further information concerning the knowledge and experiences of the persons involved in the project have to be submitted to the validator.</p>	<p>A.2.3</p>	<p>The required information was submitted to the validator and included in the final PDD.</p>	<p><input checked="" type="checkbox"/></p>
<p><u>Clarification Request No. 2:</u> The discussion and determination of the chosen baseline and the applied values/ data sources /assumptions to estimate the emission reductions have to be worked out more detailed. Further evidenced data material has to be submitted to the validator.</p>	<p>B.2.2.</p>	<p>The required additional information was included in the final PDD.</p>	<p><input checked="" type="checkbox"/></p>




Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
Clarification Request No. 3: The monitoring concept has to be elaborated more detailed. The criteria for a successful implementation of the monitoring plan have to be worked out in detail.	D.4.1.	The required additional information was included in the final PDD. The applicability of the chosen monitoring concept could be demonstrated clearly.	<input checked="" type="checkbox"/>
Corrective Action No. 2: The received positive comments on the project by local and regional stakeholders as well as state authorities have to be submitted to the validator.	G.1.4.	The required information has been submitted to the validator.	<input checked="" type="checkbox"/>


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Annex 2


Information Reference List

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Reference No.	Document or Type of Information
1.	<p>On-site interview at PT. Petromat Agrotech date: 29th of August 2005</p> <p>Validation team on site:</p> <p>Cristian Delamarian TÜV Philippines Inc. TÜV SÜD Group</p> <p>Interviewed persons:</p> <p>Mr. Rudi Wahyudi General Director of PT. Petromat Agroetch, Indonesia Mr. Klaus Trifellner Vice Chairman of Klimaschutz E.V., Germany Mr. Teuku Rivolsa Ismail Head of Aceh Parliament, Indonesia</p>
2.	<p>On-site interview at Ministry of Energy, Indonesia date: 29th of August 2005</p> <p>Validation team on site:</p> <p>Cristian Delamarian TÜV Philippines Inc., TÜV SÜD Group</p> <p>Interviewed persons:</p> <p>Ms. Maritje Hutapea Vice Director of Ministry of Energy, Indonesia Mr. Harris Head of Section for Energy Utilization Analysis, Indonesia</p>

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Reference No.	Document or Type of Information
	<p>Mr. Rudi Wahyudi General Director of PT. Petromat Agroetch, Indonesia</p> <p>Mr. Klaus Trifellner Vice Chairman of Klimaschutz E.V.</p> <p>Mr. Teuku Rivolsa Ismai Head of Aceh Parliament</p>
3.	<p>On-site interview at Allson Apartments, Jakarta date: 30th of August 2005</p> <p>Validation team on site:</p> <p>Cristian Delamarian TÜV Philippines Inc. TÜV SÜD Group</p> <p>Interviewed persons:</p> <p>Mr. Rudi Wahyudi General Director of PT. Petromat Agroetch, Indonesia</p> <p>Mr. Klaus Trifellner Vice Chairman of Klimaschutz E.V., Germany</p> <p>Mr. Teuku Rivolsa Ismail Head of Aceh Parliament, Indonesia</p>
4.	Draft Project Design Document (PDD), dated April 5 th , 2005
5.	Final Project Design Document, dated June 5 th , 2005, published in the Global Stakeholder Process in the period from July 9 th to August 8 th , 2005

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Reference No.	Document or Type of Information
6.	Revised Final Project Design Document, dated October 10 th , 2005
7.	UNFCCC homepage http://www.unfccc.int
8.	Work sheets (.xls files), “Calculation time of usage solar cookers, submitted May 3 rd , 2005
9.	Work sheets (.xls files), “Energy Payback Time Solar cooker K14”, submitted May 3 rd , 2005
10.	Tables (.xls files): “NASA Surface meteorology and Solar Energy - Available Tables”, Information for ACEH Region, submitted May 3 rd , 2005
11.	Attached document No. 1 (to the final PDD): Company profile PT Petromat Agrotech, Indonesia and CV of Mr. Rudi Wahyudi, October 2005
12.	Attached document No. 2: CV (and project-specific) skills of Dr. Seifert, September 2005
13.	Attached document No. 3: Pictures of the Solar cookers (K14) and heat retention containers, June 2005
14.	Attached document No. 4: Report about the implementation of solar cookers in Indonesia, Serambi Indonesia, 18th December 2004, p.11; PT Banda Aceh Press JI Attached document No. 4a: Cost - Calculation for duration of 7 years
15.	Attached document No. 5: AD 05 - Solar Cooker leaflet, 2005
16.	Attached document No. 6: Declaration by Klimaschutz e.V. regarding ODA, issued August 15 th , 2005 by Mr. Trifellner
17.	Attached document No. 7: Letter of the Government of Aceh (by GUBERNUR PROVINSI NANGGROEDARUSSALAM) to the Ministry of Energy, Indonesia, dated December 14 th , 2004
18.	Attached document No. 08: Technical description of Solar Cooker K14 and heat retention containers

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Reference No.	Document or Type of Information
19.	Attached document No. 09: Manual for assembling the solar cooker K14, October 2005
20.	Attached document No. 10: The monitoring card “Monitoring Card for Recording Time of Use of the Solar Cooker”, CDM Solar Cooker Project 1, October 2005
21.	Attached document No. 11: Flowchart of the monitoring procedure (with detailed information about the process and responsibilities), October 2005
22.	Information on the CDM Solar Cooker Project ACEH 1 in the newspaper of Banda Aceh on December 18 th , 2005 with invitation to discuss and comment on the project
23.	Attached document No. 12: Minutes of a further personal meeting with local stakeholders in September 2005 with several positive recommendations on the project issued by: <ul style="list-style-type: none"> • Drs. Sofyan Haroen, MM. MBA. Mayor of Sabang District, submitted September 16th, 2005 • Pemerintah Propinsi Nusa Tenggara Timur Badan Pengendalian Dampak Lingkungan Daerah, September 29th, 2005 • Pemerintah Kota Sabang Badan Pengendalian Dampak Lingkungan Daerah, September 17th, 2005 • Bupati Aceh Tenggara, , September 21st, 2005 • Walikota Sabang. September 16th, 2005
24.	Attached document No. 13 - Minutes of the meeting with the representative users in September 2005, September 15 th , 2005
25.	“Prediction of firewood consumption”, East Nusa Tenggara, issued by the head of environmental impact assessment controlling agency of

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Reference No.	Document or Type of Information
	East Nusa Tenggara Province, Kupang, September 29 th , 2005
26.	Declaration of Mr. Dieter Seifert concerning current and future consulting services for “Solar Cooker Project Aceh 1, issued August 15 th , 2005, Neuötting
27.	Newsletter of the Network for Gender and Sustainable energy, Volume 8, Issue 1, April 2005 concerning Solar Villages; in this case: Gender and Water Connections in Andean Solar Villages”
28.	Klimaschutz e. V., envisaged time schedule for project implementation, submitted by several e-mails in September 2005
29.	Klimaschutz e. V., information concerning solar cooker development and project financing, personal meeting with Mr. Seifert and Mr. Trifellner in Munich, June 08 th , 2005
30.	Approved baseline and monitoring methodologies for Small Scale CDM Project Activities, UNFCCC, 2005, http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html
31.	Validation and Verification Manual, IETA/PCF http://www.vvmanual.info