



## Assessment Report for CDM proposed standardized baseline (Version 01.0)

*(To be used by the UNFCCC secretariat in assessing the quality of a proposed standardized baseline only when requested by eligible DNAs.)*

<b>Title of proposed standardized baseline:</b>	Standardized baseline for energy use in rice mill sector of Cambodia
<b>Reference of proposed standardized baseline:</b>	PSB-0004
<b>Sector:</b>	Rice mill sector
<b>Name of DNA:</b>	Cambodia (Ministry of Environment)
<b>Dates Reviewed:</b>	<ul style="list-style-type: none"> <li>- First submission was received on December 5, 2012</li> <li>- First assessment was finalized on January 10, 2013</li> <li>- Second submission was received on February 6, 2013</li> <li>- Second assessment was finalized on February 16, 2013</li> <li>- Third submission was received on April 3, 2013</li> <li>- Third assessment was finalized on April 10, 2013</li> <li>- Fourth submission was received on April 15, 2013</li> <li>- Fifth submission was received on April 24, 2013</li> <li>- Assessment for fourth and fifth was finalized on April 30, 2013</li> <li>- Sixth submission was received on May 27, 2013</li> <li>- Final assessment was carried out on May 31, 2013</li> <li>- Assessment report publication on UNFCCC CDM website 29 September 2013</li> </ul>

**Summary of Proposed Standardized Baseline:****Scope and application of the proposed standardized baseline:**

The proposed standardized baseline (PSB) is submitted for a single Host Country, Cambodia , and is developed for:

- Baseline identification;
- Baseline emission estimation; and
- Additionality demonstration

The sector to which this proposed SB applies is the production of milled rice, and applies to the following one measure:

- Switch of technology with or without change of energy source (including energy efficiency improvement)

The SB is developed by Institute for Global Environmental Strategies (IGES) on behalf of Designated National Authority (DNA) of Cambodia. However, the reference to DNA in this report means IGES and DNA.

**Description of the proposed standardized baseline:**

The key data parameters related to this proposed standardized baselines are:

- Types and contribution (%) of technology used for rice mill;
- Types and consumption (liter/year or MWh/year) of energy used for rice mill;
- Production (ton/year) of milled rice.

The data for the above parameters were collected directly from individual rice millers, based on a sampling approach.

A data collection/calculation template was prepared and submitted along with the PSB form.

**Summary of Assessment:****Assessment process:**

The assessment consisted of the following:

1. Initial document review and findings;
2. Review of the additional documents submitted based on findings;
3. Direct consultation with DNA;
4. Identification of issues and resolution;
5. Conclusion of the final assessment report.

A review was performed on the below data/information submitted as part of the proposed standardized baseline.

First submission dated 05/12/2012 included:

- Proposed standardized baseline (F-CDM-PSB);
- Calculation sheet;
- Reference.

The initial findings and observations were communicated to the DNA on 10/01/2013, in response to which the DNA resubmitted the revised PSB and other relevant documents.

Second submission dated 06/02/2013 included;

- Proposed standardized baseline (F-CDM-PSB)\_version2;
- Calculation sheet\_version2;
- Responses for the initial findings;
- Additional documents (Reference).

The additional findings and observations were communicated to the DNA through a teleconference on 13/02/2013, in response to which the DNA resubmitted the revised PSB and responses.

Third submission dated 03/04/2013 included:

- Proposed standardized baseline (F-CDM-PSB)\_version3;
- Calculation sheet\_version3;
- Responses for the additional findings.

Based on further requests for clarification from the secretariat on 10/04/2013, the DNA revised the PSB, which was submitted on 15/04/2013 (fourth submission);

- Proposed standardized baseline (F-CDM-PSB)\_version4

Through continuous communication with the secretariat, the DNA resubmitted the following documents on 24/04/2013 (fifth submission):

- Calculation sheet\_version3-1;
- Baseline emission factor comparison (additional calculation sheet);
- Additional document (on rice husk availability).

After further consultation with the secretariat, the DNA submitted the new version of data template including the result from survey for additional sampled mills along with a new proposal for calculation of baseline emissions.

The last (sixth) submission dated on 27/05/2013 included:

- Calculation sheet\_version4;
- New proposal for baseline emissions calculation.

According to the 'guidelines for quality assurance and quality control of data used in the establishment of standardized baselines (QA/QC guidelines)', quality assurance (QA) should focus on the system and procedures to establish the standardized baseline. However, this proposal did not include a quality control (QC) report documenting how the QC procedures were implemented and how the data quality objectives and the general provisions were met, so the assessment included some important questions being asked on QC activities.

**Assessment findings and resolution:**

The following findings were identified by the secretariat. The responses to these findings by DNA are summarized in Appendix-1.

Requirements	Explanation
<b>The data quality was checked before/during/or after data collection:</b>	Refer below and to appendix 1 (findings and resolution) to this report.
(a) QC system (resource/procedure) was implemented.	Before data collection, sampling plan was developed including: procedures for handling with non-responses from rice mills, minimum requirements for input data, and description of interviewers' responsibilities. This was critical to ensure the data quality, particularly for collection of data based on interviews and sampling.
(b) QC activities was clearly documented (e.g. QC report).	QC report was not submitted. However, through F-CDM-PSB included annex I (sampling plan) and direct communication with the DNA, the QC activities were clarified. Required skills and knowledge for interviewers were clearly described in implementation plan.
<b>Were all required documents and data available for assessment?</b>	All reference and data were provided for assessment.
<b>The proposed standardized baselines were established through consultation processes:</b>	See the below.
(a) The sector or data providers were engaged and communicated enough to provide valid inputs/data.	Sector experts were engaged to provide background information to develop the standardized baselines, which was very useful to better understand the circumstances of the sector and to identify relevant parameters.
(b) Stakeholders were invited to provide inputs and comments where applicable.	Officers from Cambodia government (Ministry of Industry, Mining and Energy & Ministry of Environment) provided relevant references and inputs to IGES to develop the proposal as well as comments on the final SB results.
(c) The public consultation report was clearly documented if applicable.	Not applicable (no public consultation report was developed).
<b>The data quality objectives and the general provisions of the QA/QC Guidelines were met. If the QC report is available, this session can be skipped unless further explanation is needed (when conservative approaches were taken, further explanation is required):</b>	Some issues related to the data quality objectives and the general provisions were identified, which included completeness, relevance, traceability, accuracy, conservativeness, currentness/data vintage, transparency and consistency. All the identified issues were clarified or corrected by the DNA. Please see the Appendix 1 for the detail information.
(a) Relevant data were used to the establishment of sector-specific standardized baselines.	Data were relevant to the rice mill sector, which including milled rice production, technology/energy types and energy consumption. Non-relevant data (e.g. cost and province-based approach) were dropped in the final proposal.

<p>(b) The data scope was comprehensive enough to produce “true and fair” representative standardized baselines in the particular sector.</p>	<p>Simple random sampling method was used. The sample size was calculated correctly and the sampling requirement for reliability (95/10) was justified by checking reliability in accordance with the sampling standard/ guidelines.</p>
<p>(c) The key data and information are consistently presented.</p>	<p>Some minor issues related to consistency were identified but all were corrected, so the consistency of data and information was ensured.</p>
<p>(d) The credibility of the data sources was ensured.</p>	<p>Key data were collected via sampling (from the primary data sources- rice millers) and some default values were applied in accordance with approved methodologies (AMS-I.A, AMS-I.B &amp; AMS-I.F). When the data were collected on sites, interviewers reviewed paper-based data records to ensure the credibility of the data.</p>
<p>(e) The most recent available data were utilized. If applicable, the pre-determined data vintage was met.</p>	<p>Data vintage is one year (2011). The data vintage of three years was not met, but if the Board agrees the underrepresented countries (including Cambodia) may use different data vintage.</p>
<p>(f) Duplications and errors were avoided or corrected.</p>	<p>All identified errors were corrected and no duplications were identified.</p>
<p>(g) If any, assumptions or interpretations for data processing/ calculations were justifiable.</p>	<p>Although the data were collected via simple random sampling, and sufficient justifications were provided for further disaggregation by size (small-middle &amp; semi-large), which represented well the scale-based performance characteristics of the sector.</p>
<p>(h) The security of datasets including confidentiality was well maintained in accordance with pre-established procedures if requested.</p>	<p>Not applicable (no confidential issue was raised).</p>
<p><b>The assessment is concluded successfully, based on the overall evaluation.</b></p>	<p>The data used for development of the SB met the data quality objectives and general provisions of the QA/QC guidelines.</p>

## Appendix 1. Findings and resolutions

CL No.	Request for Clarification (CL)	Reference to:	Responses and corrective actions of DNA	Conclusion
1	<b>Exclusion of four provinces:</b> the QA/QC Guidelines requires completeness of data thus procedures to avoid, identify and handle missing data should be addressed in the proposal. Based on paddy production and cultivated area, other three provinces do not seem to have many rice mills but 'KamponThom' province does. Some reference (e.g. Cambodia Research Center for Development, 2010) provides data for KamponThom. If possible, it will be better to include the estimate for KamponThom. If not, provide further elaboration on and justification for the exclusion (e.g. the inclusion of KamponThom does not change the minimum sample size; or rice mills in Cambodia operate similarly in terms of fuel/energy use and major technology type regardless of provinces).	Completeness	Total number of sample size will not be changed, but sample number from small-scale group will be increased. Rice mills in Kampon Thom is small (average annual production is 41t/rice mill, Cambodia Research Center for Development, 2010). Since most of them are supposed to use Technology 1 due to small-scale, the carbon intensity for Technology 1 would be raised. Additional sampling survey to collect data from the small-scale group will be conducted. The Kampon Thom will be included.	Corrected. Additional survey improved the completeness of the survey data.
2	<b>Representativeness of the survey (seasonal fluctuation):</b> since this proposed standardized baseline was established from the survey results, justification for the representativeness of the survey for the entire sector in the country would be needed. The main harvest for monsoon-season crop in Cambodia occurs in December, so further justification is needed for how to take into account seasonal changes in the production of milled rice in the survey conducted during February to June. Please clarify data vintage of the "raw" data (e.g. 1 day or 1 month or 1 year of daily records) and further elaborate how to extrapolate data from paper-based daily records and how to check the reliability of the daily records.		The raw data for this survey is based on the ramp sum of the production volume for the rice millers as they normally do not store such data by daily or even monthly. Practically speaking, it may be difficult to get all the daily data for annual basis unless we monitor the operation for the entire year.	Clarified. Through direct communications, the limitations of the data and the ways to extrapolate data were clarified. Although the data could not fully represent the sector, the justifications for the conservative approach and the extrapolation were accepted.
3	<b>Representativeness of the survey (high level of variation):</b> this proposal assumed that the usage of energy as well as the scale of rice mills varied largely throughout the country and the sampled mills using technology 1 showed relatively high standard deviation. Based on 162 rice mill surveyed in 2009, Mansvelt (2010) confirmed also that there was high standard deviation in their operating hours, annual production of rice milled, and diesel consumption. In such a situation, further justification is needed for the representativeness of the survey. Also, please further justify why too large or small-scale rice mills were considered as outliers.		From the literature review, we noticed wide variation of rice millers' operation capacity. That's why we chose to conduct stratified random sample analysis for this survey by creating three groups in the Province based on the production capacity. The sampling survey resulted in that rice mill samples were wide range in annual production and the allocation was skewed. Therefore, we used logarithm to transform the data.	Clarified and Corrected. After further discussion, the logarithm format as well as the province-based approach was dropped. Also, the key factor (size) was considered to disaggregate the SBs.
4	<b>Selection of key parameter:</b> One of the key data for this proposed standardized baseline is the diesel consumption (litre of diesel per tonne of rice) for the baseline technology. This requires a good understanding of which parameters would affect the specific diesel consumption. Please provide a more detailed description of the operation of the rice mill machine and its energy generation system in	Relevance	According to the local expert on rice mill sector, there is not much variety of technology in rice mill machines using diesel engines in Cambodia. Based on research report made by the New Energy and Industrial Technology Development Organization (NEDO, 2011, p.39-40) and interview with local	Clarified through further communication.

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	<p>Cambodia to address the following questions:</p> <p>1) Is there a variety of rice mill machines that are driven by diesel engines? What is the typical hourly capacity of the different types of rice mill machines?</p> <p>2) For each type of rice mill machines, what is the typical rated capacity of the diesel engines?</p> <p>3) How many rice mill machines and diesel engines are typically operated in one mill? How is the number related to the total annual output of the mills?</p> <p>4) How are the rice mill machines operated? For example, if the capacity is 200 kg/hr and only one customer brought 500 kg paddy, is the machine going to be operated at a full load for 2.5 hours to finish the milling service, or the miller would operate the machine at a lower load for 5 hours, or some other typical approach?</p>		<p>expert, rice mill system is consisted of several specific process.</p> <p>The report by NEDO describes that “large scale rice mill is normally operated by belt-driven system with diesel engine and not electrified other than limited use of electric devices (e.g. color sensor). Only one large scale rice mill has all electrified rice mill system (p.39). The report also mentions that “if the scale of rice mill factory is small, the number of devices used for milling will be reduced (p.40)”.</p> <p>Typical feature of rice mill in Cambodia (source: Interview with local expert): rice mill normally operates in full load and, therefore, reduce operating time as much as they could.</p>	
5	<p><b>Other supplementary parameters:</b> The sampling survey data (excel file) indicates that the survey tried to collect data on electricity consumption (kWh) per day, capacity of diesel engine (kW) and capacity of dynamo (kW) but failed to collect the full data (too many missing). Could you please explain why the survey planned to collect these data and justify that the survey results without consideration of these data are still valid (e.g. the overall annual production is the main parameter influencing the specific diesel consumption, but the capacity parameters are not)?</p>		<p>The information on the capacity of diesel engine and those of dynamo are supplemental. Those do not affect the calculation of specific diesel consumption, but only to provide some information in relation to rice production and facility capacity for cost analysis.</p>	Clarified.
6	<p><b>Sampling method based on province:</b> practically the sampling approach based on province is generally understandable, but the scale category based on province is not easily understandable without justification.</p> <p>Based on the MIME data, we identify that the stratified approach based on province is problematic. For example, Pursat province has 1665 millers but only 35 millers representing 85.42% of the rice mill production in this province and 95.8% of the millers are very small size (less than 100 ton). Oddor Meanchey province has similar situation (1 miller presents 78% of the production and the other 50 millers are very small). Can these provinces be included into the medium group? The simple average method does not seem reasonable.</p>		<p>At the planning phase, we considered rice mill’s location was key factor of usage status of technology and energy source in common with scale, because electricity grid system coverage area is limited in Cambodia. After the survey, we found the rice mill in the electricity supplied area were limited numbers, we will exclude area elements from the survey.</p>	Corrected.
7	<p><b>Cost comparison:</b> Table 1 is a very good analysis but its application can be limited. Depending on the Cambodia situation (how many rice millers utilize more than 750kW -energy generation equipment), you may modify the cost information (for larger scale) or may not need it for</p>		<p>Additionality demonstration is excluded from this proposal.</p>	Corrected. All the cost data/information was not relevant any longer.

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	additionality demonstration.			
8	<b>Reference:</b> Groves et al. (2009) was not referred but listed in the reference; IEA (2010) was referred but not listed in the reference; Japan International Cooperation Agency et al. (2006) was not included in the submission package. Please ensure that all data and information sources be properly referenced, in particular when specific values were referred.	Traceability	We revised the reference: Groves et al. (2009) was excluded, while IEA (2010) reference was included. The literature from Japan International Cooperation Agency et al. (2006) was also included as the additional data.	Corrected.
9	<b>Data sources</b> of cost in the Calculation sheet: most cost data were based on literature review and estimations with several assumptions. However, some data sources are not traceable. For example, it is hard to link between Table 1.5 and Table 4.2. Cost comparison is very important for technology 1 and technology 3. Please justify how to ensure that all cost data for these two technologies were valid and robust.		It was conversion miss from Table 4.2 to Table 1.5. We revised the data source accordingly.	Corrected. The cost data/information was not relevant any longer.
10	<b>Data sources</b> of Table 2 in the F-CDM-PSB: the submitted MIME data file does not provide 'total production capacity'. Please provide its data source with data unit and also elaborate how to calculate the required sample number per group.		The data source is MIME and the unit is "ton". Please see the additional file of 'Data source for Table 2' and the sheet of 'sample group'. The number per sample group is calculated with production capacity and number of rice mills by province.	Clarified and Corrected.
11	<b>Quality control (QC) for survey:</b> Please further elaborate on what are the appropriacy checking and the minimum requirements for the sample. If any, please provide further elaboration on the QC conducted for data quality.		In the sampling plan, we defined the minimum requirements (Annex in F-CDM-PSB) as follows: 1. respondents need to be a rice mill owner, and 2. minimum requirement for answering the questions (i.e. rice production diesel consumption, energy source and technology). The requirement 1 was checked by the survey implementer and requirement 2 was checked by a surveyor and data analyst. All the data was checked by Climate Change Department of Ministry of Environment Cambodia.	Clarified.
12	<b>Average vs. weighted average of diesel consumption per production (liter/ton):</b> weighted average is more conservative and takes into account the scale-dependency of the energy efficiency. Please justify the conservativeness of your selection.	Conservative-ness	We revised to apply the weighted average for the conservativeness of this proposal.	Corrected. However, due to scale-dependency of the performance, the 80th percentile was applied instead of the weighted average in the final submission.
13	<b>Justification of conservativeness:</b> Since the survey was already		1) The survey data may not representative, because	Clarified and Corrected.



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	<p>conducted and the survey results were used to establish the standardized baseline, it is important to justify that the sample data are representative and accurately used. If it is difficult to justify that, you should justify the conservativeness of the approach. According to the QA/QC guidelines, the data quality objectives should be met but if cannot be met, a conservative approach should be applied. The sample data do not seem representative because one relatively important province (Kampon Thom) was excluded, seasonal fluctuation was not incorporated and the small size millers were not enough representative (only one included; &lt;100). Some further analyses or literature or other secondary data could justify the conservativeness. For example, the graph derived from the sample data indicates that larger millers are likely to consume less diesel per ton of milled rice than smaller millers (the power regression model fits best), meaning that the sample data that include less small millers are conservative. If the conservativeness cannot be justified, additional sample should be taken to improve the representativeness or conservativeness.</p>		<p>the scale allocation is quite different from that of the MIME's data. Since most of the samples in our survey are large compare to the average mills in Cambodia, it would be conservative to use the emission factor calculated based on this data, since they tend to be low emission factor than those of small scale rice millers.</p> <p>2) According to QA/QC guideline, the average value of the top 20% in the sector is introduced for conservative approach. But it cannot identify top 20% of rice mills in Cambodia due to the limited data set. Instead, the weighted average based emission factor was calculated.</p> <p>3) Additional survey was conducted.</p>	
14	<p><b>Initial cost per unit of milled rice:</b> since annual operating cost was used, initial cost should be recalculated by taking into account life time of technologies.</p>	Accuracy	<p>We revised cost calculation considering with lifetime. (Table 6, calculation sheet version 2).</p>	<p>Corrected. Later. The proposal specified the applicability (size), which fallen in the automatic additionality condition, so all cost data/ information were dropped.</p>
15	<p><b>Yb% (threshold) for baseline identification:</b> this is the rice mill sector, so 90% is the default.</p>		<p>90% for Yb% is applied.</p>	<p>Corrected. After further consultation, the 80<sup>th</sup> percentile was applied.</p>
16	<p><b>Application of logarithm:</b> the wide range of the annual production is a relatively manageable size and the high level of variation cannot be solved solely by applying logarithm. If logarithm is used, more complications are added without more benefits added.</p>		<p>The reason of application of logarithm was to make standard deviation smaller to response your comment in which justification was needed for the representativeness of the survey in high level of variation. Logarithm is introduced in P57 of the sampling guideline.</p>	<p>Corrected. The Logarithm approach was dropped.</p>
17	<p><b>Sampling requirement for reliability:</b> according to the QA/QC guidelines, industrial sectors should apply 95/5 confidence/precision. Please justify the conservativeness of your selection (95/10).</p>		<p>'Guidelines for quality assurance and quality control of data used in the establishment of standardized baselines' was introduced on 2 March 2012, which was after the survey started. The most conservative value available was 95/10, which was provided in 'Standard for sampling and surveys for CDM project activities and programme of activities version 2' at</p>	<p>Clarified.</p>

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			<p>the time of planning phase.</p> <p>Data reliability was checked in accordance with the guidance. The sample met the reliability requirement. The skewedness of the sample could be justified by a conservative approach.</p>	
18	<p><b>Data vintage:</b> Based on the proposal, we identify that the data vintage is one year. Can you specify the year (e.g. 2011 or mid-2011 to mid-2012)? Does the data of annual operation days represent 2011?</p>	Currentness/ Data vintage	<p>The survey was implemented in 2012, and the data represents the vintage of 2011.</p>	<p>Clarified. The data vintage of three years was not met but some countries (including Cambodia) may use different data vintage as long as the Board agrees.</p>
19	<p><b>Currentness:</b> Based on the teleconference occurred on 13 February 2012, we understood that the one day data of both rice production and fuel consumption meant the average 1-day data, which were verified by weekly records available at the visiting sites. Therefore, the data may represent only one or two weeks during the survey period (February to June 2012).</p>			<p>This type of sampling survey can only collect voluntary-based answers like census survey. The rice mill owners may provide the same answer all year around as far as the operation and the production capacity are the same.</p>
20	<p><b>Public consultation:</b> if any, please explain how to achieve the transparency, which including information on the consultation meetings. For example, how many/ what kinds of comments were received and how you incorporated the comments in establishing the SB.</p>	Transparency	<p>We organized two consultation meetings (January and October, 2012) to introduce this proposal and invited comments.</p> <p>Most of the comments were general about SB. The specific comments on the proposal and our responses were as follows:</p> <p>1) The average consumption per rice miller in Cambodia is 20L/t-rice. It is low efficiency compared with other countries case. (source: Officer of Ministry of Industry, Mining and Energy)=&gt;This figure is not much different from our research (simple average).</p> <p>2) Why don't you compare your result with other research? (source: Officer of Ministry of Environment) =&gt;then the research paper of Mansvelt (2010) was provided from the officer. This paper was added as the reference.</p> <p>3) The baseline emission factor is lower than I expected. (source: Officer of Ministry of Environment) =&gt;It seems fine for conservative manner.</p>	Clarified.

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21	<p><b>Sampling method:</b> 'stratified random sampling' was chosen but 'simple random sampling' was used to calculate the required sample size. The minimum sample size for 'stratified random sampling' is '96'. Please refer to "Guidelines for sampling and surveys for CDM project activities and programme of activities (version 02.0)" and modify the Annex I (sampling plan) consistently.</p>	Consistency	<p>Since the method to calculate the sample size for the survey was not introduced at the time of planning survey, we attempt to calculate based on a formula provided by LeBlanc (2004). Therefore, we are not aware of the minimum sample size of 96 as provided by the version 2.0 of the guideline.</p> <p>"Guidelines for sampling and surveys for CDM project activities and programme of activities (version 02.0)" was issued on 13 September 2012. Since this survey was planned and conducted from the late 2011 to beginning of 2012, the guidance was not available. The reference used for this proposal was "Standard for sampling and surveys for CDM project activities and programme of activities version 2.0," which was issued on 25 November 2011.</p>	Corrected. In the last version of proposal, 'simple random sampling' as well as "Standard for sampling and surveys for CDM project activities and programme of activities version 2.0" were used.
22	<p><b>Sampling method vs. Survey results:</b> 'stratified random sampling' was chosen since energy efficiency and technology usage would depend on the business scale. However, the survey results were not analyzed with a scale-based category. Please justify why the standardized baseline was established without taking into account the scale-dependency of energy efficiency and technology usage.</p>		<p>Based on the survey, we found the data from MIME does not provide sufficient current information on the rice millers particularly for production capacity based on the comparison of our surveyed data (please see the sheet named "survey"). We also see the large variance of the production data depending on the survey conducted from 72 (MIME, 2011), 788 (Mansvelt, 2010) and our results 1,538. Therefore, we try to establish the scale category and try to get the data by "stratifying" the sample data we will receive.</p>	Corrected. The latest version of submission (in particular, calculation sheet) analyzed the scale-dependency and proposed a new EF per size (disaggregated by size: small-middle & semi-large).
23	<p><b>Survey data of rice millers using Technology 3:</b> in the F-CDM-PSB (Table 1), the value of carbon intensity was calculated from the data of one rice mill in the sample (diesel consumption per production =6 liter/ton), but the cost was calculated from the 25 rice millers installing gasification system (average diesel consumption per production =7.2 liter/ton). Survey data were used inconsistently but in the more conservative way. Since there are two survey data related technology 3, further justification for the representativeness of the selected survey data is needed.</p>		<p>The results of sampling survey should be used to calculate carbon intensity as well as cost for other technologies for consistency. Cost calculation for Technology 3 was revised accordingly.</p> <p>The additional survey by interviewing the identified 25 rice millers with technology 3 was conducted to justify diesel replacement rate in the baseline emissions calculation formula. It is because only one case of the sampling survey could not be regarded as the representative of the situation.</p>	Corrected & Clarified. The cost data/information was not relevant any longer.
24	<p><b>Total number of registered rice millers:</b> '27,407' in the F-CDM-PSB vs. '27,408' in the MIME excel file vs. '22,397' in the Table 2. Due to the data quality of KamponThom and no data availability of the other three</p>		<p>"22,397" is the number of registered rice mills other than four provinces whose data is lacking or may not be reliable.</p>	Corrected.

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	provinces, these four provinces were excluded in the survey. Therefore, '27,407' including KamponThom's data does not seem reliable. The total number of rice millers is a very important value. Please select one reliable value with clear justification of the selection and use the value consistently.		Additional sampling survey to collect data will be conducted, which included Kampon Thom.	
25	<b>Number of rice millers using Technology 1:</b> '62' in the F-CDM-PSB (page 6 & page 13) vs. '61' in the Calculation sheet (Sample).		The correct number should be 61.	Corrected. Since additional survey was conducted and new data included, the number should be updated.
26	<b>Electricity consumption of rice millers using Technology 2:</b> '900kWh' in the Calculation sheet (Tech2) vs. '90kWh/h' in the F-CDM-PSB (Table 1).		Hourly consumption of '90kWh' is correct.	Corrected. The cost data/information was not relevant any longer.
27	<b>Annual operating cost of rice millers using Technology 3:</b> '2694 USD' in the Calculation sheet (Tech3) vs. '7494 USD' in the Calculation sheet (Comparison).		"2,694USD" should be used.	Corrected. The cost data/information was not relevant any longer.
28	<b>Total annual milled rice production (ton) using Technology 1:</b> '87,006' in Table 7.2 vs. '88,086' in Table 7.1 (calculated) in the Calculation sheet (Sample).		'88,086' is correct. Table 7.2 and Figure 5 (F-CDM-PSB) were revised accordingly.	Corrected.
29	<b>Baseline emissions vs. project emissions:</b> to avoid confusion, baseline emissions in projects need to be changed with project emissions in the F-CDM-PSB (page 13)		Equations for the project emission were added as supplementary information, which would differ from equations for the baseline emission factors.	Corrected.

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## History of the document

Version	Date	Nature of revision(s)
01.0	30 September 2013	Initial publication.
<b>Decision Class:</b> Regulatory <b>Document Type:</b> Form, (for Secretariat use only) <b>Business Function:</b> Methodology <b>Keywords:</b> Assessment, Standardized baselines, Methodologies		