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Re-Validation of Standardized Baseline

ASB0008: METHANE EMISSIONS FROM RICE CULTIVATION IN THE REPUBLIC OF THE PHILIPPINES

Report No. 10493AJ

21 January 2019

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South Asia

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04-01-2019	**02**
Project Participant (contractor): Deloitte Tohmatsu Financial Advisory LLC Marunouchi, Shin-Tokyo Building, 3-3-1 Chiyoda-ku TOKYO 100-0005 JAPAN	**Host Country:** Phillipines
Validated SB: ASB0008 "Methane Emissions from Rice Cultivation in the Republic of the Philippines"	**Sectoral Scope(s):** 15, TA 15.1

VALIDATION OPINION

TÜV SÜD has performed a re-validation of the aforementioned Standardized Baseline "ASB0008: Methane Emissions from Rice Cultivation in the Republic of the Philippines". Standard auditing techniques have been used for the re-validation of the Standardized Baseline. An internal validation checklist has been prepared to conduct the validation process in a transparent and comprehensive manner.

The review of the Proposed standardized baseline submission form followed by subsequent follow-up interviews, and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the checklist. In the opinion of TÜV SÜD, the standardized baseline meets all relevant CDM requirements if the underlying assumptions do not change. TÜV SÜD recommends the standardized baseline for approval by the CDM EB.

No CAR and CR has been raised during assessment of the documents.

The validation has been performed following the Guidelines for Quality assurance and quality control of data used in the establishment of standardized baselines, version 02. Based on the work described in this report, nothing has come to our attention that causes us to believe that any baseline component or issue has not been covered by the validation process.

Pune, 21/01/2019

Eswar Murty
Certification Body "Environment and Energy"
TÜV SÜD South Asia

Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
ER	Emission Reduction
GHG	Greenhouse gas(es)
QA	Quality Assurance
QC	Quality Control
SB	Standardized Baseline
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

1.1 Objective

The objective of the validation process is to provide an independent assessment by a third party, a Designated Operational Entity (DOE), of a proposed standardized baseline against the applicable CDM requirements. The assessment involves the evaluation whether the proposed standardized baseline complies with the requirements of CDM Standard and any applicable guidance issued by UNFCCC. Validation is part of the CDM standardized baseline approval process and results in a conclusion by the executing DOE on whether or not a standardized baseline is valid to be submitted for approval to the CDM EB by respective DNA.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. Furthermore, publicly available information was considered as far as available and required.

The assessments were carried out on the basis of the following requirements applicable:

- The Standardized baseline report,
- The SB calculation spread sheet,
- supporting documents made available to the DOE,
- Information collected through performing interviews.

The validation process is not meant to provide any form of consulting for the consultant and Designated National Authority (DNA). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the standardized baseline.

2 VALIDATION METHODOLOGY

The information provided by the DNA and relevant stakeholders is assessed by applying the means of validation specified in the CDM project standard as well as the Guideline on Quality assurance and quality control of data used in the establishment of standardized baselines and using appropriate standard auditing techniques.

Before the assessment begins a competent team to perform the validation is selected. The team is selected to cover the technical scope(s), sectoral scope(s), prior experience in CDM projects and relevant host country experience for evaluating the proposed standardized baseline. The members of the assessment team carried out the desk review, follow-up actions, resolution of issues identified, and the preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB "Environment and Energy" before being issued to the parties.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed an assessment team in accordance with the appointment rules of the TÜV SÜD certification body "Environment and Energy".

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB TÜV SÜD operates the following qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL);
- Validator (V);
- Technical Experts (TE);
- Technical reviewer (TR).

It is required that the sectoral scope(s) and the technical area(s) (TA) linked to the standardized baseline has to be covered by the assessment team. A technical review is conducted to perform a check on quality and completeness.

Assessment Team:

Name	Qualification	Coverage of scope	Coverage of technical area	Host country experience	Coverage of financial aspect
Akhilesh Joshi	**ATL/V**	☐	☐	☑	**NA**
Dr. Dhanya Nambiar	**TE**	☑	☑	☐	**NA**

Technical Reviewers: Eswar Murty, Moriz Vohrer (15.1)

2.2 Review of Documents

The Proposed standardized baseline submission form and additional background documents have been reviewed to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done as an initial step of the validation process. A complete list of all documents and evidence material reviewed is attached as Annex 2 to this report.

2.3 Cross-check

During the validation process the team has made reference to available information related to similar technologies as the mentioned in the proposed standardised baseline. Standardized baseline has also been reviewed against the CDM small scale methodology AMS-III.AU.: "Methane emission reduction by adjusted water management practice in rice cultivation" (Version 4.0), applied to confirm the appropriateness of formulae and correctness of calculations.

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions, clarifications, and any other outstanding issues which need to be clarified for TÜV SÜD`s conclusion on the project design. The CARs and CLs raised by TÜV SÜD are resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in Annex 1 to this report.

2.5 Internal Quality Control

Internal quality control within the team is assured by means of a technical review process that takes place after the draft report preparation. The internal quality control in the validation process is given by the final decision (Validation Opinion) made by the CB “Environment and Energy”.

3 STANDARDIZED BASELINE VALIDATION

The audit team has assessed the proposed standardized baseline based on which are presented in the below sections.

3.1 Involved Parties

The proposed standardized baselines (SB) are submitted for a single Host Country, Philippines, and for the purpose of Methane Emissions from Rice Cultivation in the Republic of the Philippines. The SBs have been developed by Deloitte Tohmatsu Financial Advisory LLC on behalf of Designated National Authority (DNA) of The Republic of the Philippines.

3.2 Related CDM Methodologies

AMS-III.AU. “Methane emission reduction by adjusted water management practice in rice cultivation”, version 04

The proposed voluntary SB do not supersede any sections including applicability criteria set by the eligible methodology mentioned above. The result of this SB can only be applied of the prospective CDM projects only if they comply with the methodology in all relevant aspects.

3.3 Quality Assurance and Quality Control

As per the requirements of the Guideline: “Quality assurance and quality control of data used in the establishment of standardized baselines” (EB79, Annex 07), the DOE has assessed the following elements of the QA/QC protocol against the data quality objectives outlined in the guideline.

	Elements	DOE Assessment
a)	System availability – identify whether a “standardized” data system (collection, consolidation and maintenance) is currently in place and a procedure for reporting activities conducted as part of the QC system has been developed and implemented;	The proposed standardized baseline has been developed using the methodological approach as mentioned in approved CDM small scale methodology AMS-III.AU.: "Methane emission reduction by adjusted water management practice in rice cultivation" (Version 4.0) Hence, a standardized data collection system is in place and QC system is followed in line with the applicable CDM methodology. The proposed standardized baseline form is assessed as complete and consistent in the acquisition of relevant, complete, and current data.
b)	Conformity – assess whether the QA/QC system, the procedures and all the approaches to develop the datasets met the data quality objectives. In particular, DOEs should assess whether a conservative approach has been applied in a consistent	The proposed standardized baseline approach is built upon the framework described in of AMS-III.AU, version 04 and provides seasonal country specific emission factor values for the Philippines. Assessment team confirms through the letter issued

	manner; whether the data delivery protocol was consistent with the data template if applicable; and whether the transparency was ensured, based on the public consultation report and the QC report. DOEs should check whether the QA/QC procedures were: (i) developed in accordance with the QA/QC Guidelines; and (ii) effectively implemented (e.g. met the data quality objectives);	by "Philippine Rice Research Institute" and DNA of Philippines that there is no new research and publications available which pertaining to studies on emissions and emission factors in rice fields in the Philippines, which affects national values for the standardized baseline. The data sources as previously acquired at the time of first submission remains current and valid. Most of the data used to calculate the baseline has been derived from IPCC 2006 guidelines and country specific relevant studies, which are publicly available. Where there were data gaps, conservative estimates based on IPCC 2006 guidelines applied. The datasets were acquired transparently and cross-checked by the assessment team.
c)	Traceability – check whether all data and information relating to the datasets and procedures for standardized baselines were clearly documented	Information and data used in determination of the SB were found to be clear and traceable. All the data sources mentioned in SB form were available for validation and mentioned in Annex 2 of this report.
d)	Security – check whether a security system for data management is in place and has operated effectively. Identify whether any issues related to security occurred	A security system for data management is in place in the DNA office. All data collected is saved electronically and paper reports are filed away securely. No incidents related to data security have been reported.
e)	Error tolerance – check whether DNAs planned to minimize errors and established and implemented procedures to identify and correct errors proactively.	The DNA, through the QA/QC system has sought to minimize errors and has established procedures to identify and correct errors. These procedures are confirmed through the follow up with Philippine Rice Research Institute, which is responsible for collection of the relevant country specific data for the proposed SB in future.

Annex 1
List of Findings

Not Applicable

Annex 2

Information Reference List

S.No	Title of the document
1	Approved standardized baseline update request form (Version 02.0) for ASB0008: Methane Emissions from Rice Cultivation in the Republic of the Philippines (version 01.0)
2	Letter issued from the Philippine Rice Research Institute regadring the latest data availibility for upfdation fo the proposed SB
3	Recommendation Letter issued from the Government of the Republic of the Philippines and its designated national authority (DNA), the Environmental Management Bureau of the Department of Environment and Natural Resources updation fo the proposed SB
4	Report on Temporal patterns of methane emissions from wetland rice fields treated by different modes of N application , prepared by R. Wassmann, H.U.Neue, R.S.Lantin, J.B.Aduna, M.C.R.Alberto, M.J. Andales, M.J.Tan, H.A.C.Denier van der Gon, H.Hoffmann, H.apen, H.Rennenberg & W.Seiler
5	Report on Characterization of methane emissions from rice fields in Asia. I. Comparison among field sites in five countries, prepared by R. Wassmann, H.U.Neue, R.S.Lantin, L.V. Buendia & H.Rennenberg
6	Report on Methane emission from irrigated and intensively managed rice fields in Central Luzon (Philippines), prepared by T.M. Corton, J.B. Bajita, F.S. Grospe, R.R. Pamplona, C.A. Asis Jr., R. Wassmann, R.S. Lantin & L. V. Buendia
7	Report on Water Management in Irrigated Rice: Coping with Water Scarcity, prepared by B.A.M. Bouman, R.M. Lampayan, and T.P. Tuong
8	Spreadsheet for calculation of Emission Factors for rice fields in the Philippines in accordance with SB
9	Bureau of Agricultural Statistics - Philippine Data from Year 2008-2012 https://psa.gov.ph/sites/default/files/Selected%20Statistics%20on%20Agriculture%202013.pdf
10	CDM methodology AMS-III.AU: Methane emission reduction by adjusted water management practice in rice cultivation, Version 04.0
11	CDM Procedure for Development, revision, clarification and update of standardized baselines, Version 05.2
12	CDM Guideline: Quality assurance and quality control of data used in the establishment of standardized baselines, Version 02.0

Annex 3
Appointment Certificates

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

South Asia

CERTIFICATE OF APPOINTMENT

Mr. Joshi, Akhilesh fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1: 2006	Other
	☒	☒	☒	☐	☐

Qualification as						
Status	Validator ☒	Verifier ☒	ATL ☐	Technical Reviewer ☐	Financial Expert ☐	Technical Expert ☒
TA (s)	1.2, 3.1, 4.1, 10.1					

Country Expertise						
Region	1	2	3	4	5	Other
	☒	☐	☐	☐	☐	
Further countries						

Technical Area
1.2_Renewables
3.1_Energy demand
4.1_Cement and lime production
10.1_Fugitive emissions from oil and gas

This appointment is valid until 31.12.2019 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.
In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.
Your Certificate has the internal reference no. CB-IND-CCP-00101/001.

Date	Signature
01/06/2018	

IS-CMS-CB-POG-01/05, version 03

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TS0514

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

South Asia

CERTIFICATE OF APPOINTMENT

Mrs. Nambiar, Dhanya fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1: 2006	Other
	☒	☒	☒	☐	☐

Qualification as						
Status	Validator ☒	Verifier ☒	ATL ☐	Technical Reviewer ☒	Financial Expert ☐	Technical Expert ☒
TA (s)	13.2, 14.1, 15.1					

Country Expertise						
Region	1	2	3	4	5	Other
	☒	☐	☐	☐	☐	
Further countries						

Technical Area
13.2_Manure
14.1_Afforestation and reforestation
15.1_Agriculture

This appointment is valid until 31.12.2018 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.
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Your Certificate has the internal reference no. CB-IND-CCP-0091/002.

Date	Signature
01/09/2017	

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CERTIFICATE OF APPOINTMENT

Mr. Murty, Eswar fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1: 2006	Other
	☒	☒	☒	☒	☐

Qualification as						
Status	Validator ☒	Verifier ☒	ATL ☒	Technical Reviewer ☒	Financial Expert ☒	Technical Expert ☒
TA (s)	1.1, 1.2, 3.1, 4.1, 13.1					

Country Expertise						
Region	1	2	3	4	5	Other
	☒	☐	☐	☐	☐	
Further countries						

Technical Area
1.1_Thermal Energy Generation
1.2_Renewables
3.1_Energy demand
4.1_Cement and lime production
13.1_Solid waste and wastewater

This appointment is valid until 31.05.2019 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.
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Your Certificate has the internal reference no. CB-IND-CCP-0031/009.

Date	Signature
01/06/2018	

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