Proposed standardized baseline submission form (Version 02.0)

To be used by a designated national authority (DNA) when submitting a proposed standardized baseline in accordance with the "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).

INFORMATION TO BE COMPLETED BY THE DNA

Title of the proposed standardized baseline:	Standardized Baseline for Methane Emissions from Rice Cultivation in the Republic of the Philippines
Name(s) of the Party or Parties to which the proposed standardized baseline applies:	Philippines
DNA submitting this form:	Philippines
Is this one of the first three submissions for a Party with 10 or fewer than 10 registered CDM project activities as of 31 December 2010? *(For such a Party, the submission of an assessment report may be omitted. Not required to check Yes or No if the submission is for a group of Parties.)*	☐ Yes ☒ No

Attachments:

☒ Additional documentation supporting the submission (e.g. relevant data, documentation, statistics, studies, calculation tables, etc.), where applicable (Please specify below)

1) Wassman et al. (1994) Temporal patterns of methane emissions from wetland rice fields treated by different modes of N application, Journal of Geophysical Research, vol. 99, p. 16,457-16,462

2) Wassman et al. (2000) Characterization of methane emissions from rice fields in Asia, Nutrient Cycling in Agroecosystems 58: 1-12

3) Corton et al. (2000) Methane emissions from irrigated and intensively managed rice fields in Central Luzon (Philippines), Nutrient Cycling in Agroecosystems 58: 37-53

4) Bouman et al. (2007) Water management in irrigated rice: Coping with water scarcity, IRRI

5) Calculation of the emission factors (MS Excel file)

6) BAS Data (2008-2012) (MS Excel file)

☐ Data used to establish the proposed standardized baseline

☐ An assessment report on the quality of the data collection, processing and compilation prepared by a designated operational entity (DOE)

☐ Letters of approval of all the DNAs of the Parties to which the proposed standardized baseline applies, where the standardized baseline applies to a group of Parties

Name of authorized officer signing for the DNA:	Albert Altarejos MAGALANG
Date (DD/MM/YYYY) and signature for the DNA:	22 May 2014
Contact information of the focal point(s) of the DNA:	Climate Change Office, Environmental Management Bureau, Dept of Environment & Natural Resources

(Names, email-addresses and phone contacts for procedural and technical communication on the submission)	Email: albertmgg@emb.gov.ph Telephone: +632 920 2251 / + 632 376 1992
Name(s) of the proponent(s) of the proposed standardized baseline:	United Nations Development Programme with the support of Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
Affiliation of the proponent(s): *(The definition of "admitted observer organization" can be found at http://unfccc.int/resource/ngo/art7_6.pdf)*	☐ Party ☐ Project Participant (PP) ☐ International Industry Organization ☒ Admitted Observer Organization
Contact information of the focal point(s) of the proponent (s): *(Names, email-addresses and phone contacts for procedural and technical communication on the submission. Not required to complete this section if the DNA(s) is(are) the proponent(s) of the proposed standardized baseline.)*	Ms. Alexandra Soezer E-mail: alexandra.soezer@undp.org Tel: +1-212-906-6433 Mr. Vladislav Arnaoudov E-mail: arnaoudov-vladislav@sc.mufg.jp Tel: +81-3-6213-6382

Proposed standardized baseline submission form
CDM-PSB-FORM (Version 02.0)

Title: "Standardized baseline for methane emissions from rice cultivation in the Republic of the Philippines"

Submission date: 08/05/2014

Version number: 01.0

Approach

The standardized baseline is developed using the approach contained in the following methodology:

AMS-III.AU. "Methane emission reduction by adjusted water management practice in rice cultivation", ver. 3.0.

For demonstration of additionality, the approach contained in the following guidelines is applied:

"Guideline on the demonstration of additionality of small-scale project activities", ver. 09.0

Elements to be standardized

☒ Additionality demonstration

☐ Baseline identification

☒ Baseline emission/removal estimation

☐ Land eligibility demonstration (applicable only to afforestation and reforestation project activities).

Further inputs requested to the DNA (To be completed by the secretariat)

SECTION A: PROPOSED STANDARDIZED BASELINE DEVELOPED USING THE "GUIDELINES FOR THE ESTABLISHMENT OF SECTOR SPECIFIC STANDARDIZED BASELINES"

Applicability of the proposed standardized baseline

Not applicable.

Additionality demonstration

Not applicable.

Baseline identification

Not applicable.

Baseline emission factor estimation

Not applicable.

Use of the proposed standardized baseline with an approved methodology

Not applicable.

Validity of the proposed standardized baseline

Not applicable.

Deviations from the guidelines (if applicable)

Not applicable.

References and any other information

Not applicable.

SECTION B: PROPOSED STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED METHODOLOGY

Applicability of the proposed standardized baseline

The proposed standardized baseline is applicable to all regions within the geographical boundary of the Republic of the Philippines.

Additionality demonstration (if applicable)

For demonstration of additionality, the approach contained in paragraph 1 c) of the "Guideline on the demonstration of additionality of small-scale project activities", ver. 09.0, Barriers due to the prevailing practice, is applied.

The standardized baseline is applicable only to transplanted and continuously flooded rice cultivation that uses straw on season as an organic amendment. It has been historical practice in the Philippines to continuously flood transplanted rice fields on season up to harvest, as this is the easiest method to controlling pest and weeds[1]. Additionally, in the country there is only fixed irrigation water payment[2] for farmers, which does not depend on the volume of water consumed. Although in 2009 the Department of Agriculture of the Philippines adopted "Guidelines on the adoption of water-saving technologies (WST) in irrigated rice production systems in the Philippines" which promotes alternative wetting and drying (AWD), lack of funding and established practice prevent its dissemination in the Philippines[3]. Therefore, the current penetration rate of AWD is limited only to pilot projects[4].

In view of the above, it can be concluded that there are no effective policies or regulatory requirements that will stimulate switch from the prevailing practice in irrigated rice fields – continuous flooding – to AWD, a method that leads to lower GHG emissions from rice cultivation[5]. Therefore, switch at irrigated transplanted rice fields from continuous flooding on-season to AWD is considered automatically additional in the case of the Philippines.

Baseline identification (if applicable)

The baseline is identified in paragraph 6 of AMS-III.AU. as the current practice, e.g. transplanted and continuously flooded rice cultivation in the project fields that uses straw as an organic amendment.

[1] See: http://books.irri.org/9789712202193_content.pdf , Section 1.3, page 2, states that continuous flooding helps control pests and weeds.
[2] http://www.nia.gov.ph/services.php
[3] See: Siopongco J.D.L.C. et al., "Alternate wetting and drying in Philippine Rice Production: feasibility study for a Clean Development Mechanisms", p.4, Lessons learned: http://books.irri.org/TechnicalBulletin17_content.pdf
[4] Same as footnote 1.
[5] UN FAO 2010. "Climate-smart" agriculture: Polices, practices and financing for food security, adaptation and mitigation. (http://www.fao.org/docrep/013/i1881e/i1881e00.pdf). For an example, see Box 5., p.5

Baseline emission estimation (if applicable)

The approved methodology AMS-III.AU., "Methane emission reduction by adjusted water management practice in rice cultivation" Version 3.0[6] provides two approaches for the estimation of emission reductions. The first approach requires direct measurements of methane emissions for the establishment of the baseline as well as in the project scenario and is described in paragraphs 8 – 13 of the methodology[7]. The second approach, described in paragraphs 15 – 17, uses default values derived from the IPCC 2006 Guidelines for National Greenhouse Inventories and establishes methane emission reduction factors (instead of separate baseline and project emission factors). Although the second approach is already standardized, it does not provide any country specific values.

The proposed standardized baseline approach is built upon the framework described in paragraphs 8 – 13 of AMS-III.AU, ver. 03.0.

Paragraph 7 states that baseline emissions are calculated on a seasonal basis using the following formula:

$$BE_y = \sum_s BE_s \quad \textbf{(1)}$$

$$BE_s = \sum_{g=1}^{G} EF_{BL,s,g} * A_{s,g} * 10^{-3} * GWP_{CH4} \quad \textbf{(2)}$$

Where:

BE_y	Baseline emissions in year *y* (tCO_2e)
BE_s	Baseline emissions from project fields in season *s* (tCO_2e)
$EF_{BL,s,g}$	Baseline emission factor of group *g* in season *s* ($kgCH_4$/ha per season)
$A_{s,g}$	Area of project fields of group *g* in season *s* (ha)
GWP_{CH4}	Global warming potential of CH_4 (tCO_2e/tCH_4, use value of 25)[8]
g	Group *g*, covers all project fields with the same cultivation pattern as determined with the help of table 1 (*G* = total number of groups)

Rice Field Classification (*g*)

The first step in establishing the baseline emission factor is the classification of rice fields (*g*). Paragraph 4 of the methodology provides a table for classification of rice fields as per cultivation patterns, covering the following parameters: water regime – on-season, water regime – pre-season, organic amendment, soil

[6] http://cdm.unfccc.int/UserManagement/FileStorage/SLAHVBCKDY2QI86094XZ5UR1OMWEG3

[7] This approach is based on the approach presented in the 1996 IPCC Guidelines for National Greenhouse Gas Inventories.

[8] Although the current version of the methodology suggests the use of 21, a GWP = 25 for methane is used for the second commitment period of the Kyoto Protocol.

pH, soil organic carbon and climate. The methodology recommends that ISRIC-WISE database for classifying cultivation patterns for soil pH and organic carbon. However, as no conclusive research on the effects of soil properties on methane emissions in the Philippines exists and there are no appropriate scaling factors providing in the IPCC 2006 Guidelines, the effects of soil properties (pH and organic carbon) will not be considered in the classification of rice fields[9]. In terms of climate, Philippines fall into Agroecological Zone 3 (AEZ 3), characterized as warm and humid tropics[10]. Therefore, no further classification as per AEZ and use of separate scaling factors is required within the Philippines.

In view of the above, fields will be classified into groups *g* only according to the water regime on-season and pre-season, as well as according to the organic amendments used. 67 % of the rice fields in the Philippines are irrigated[11]. Irrigated rice fields in the Philippines are continuously flooded on-season, which is the traditional historically established cultivation practice[12]. Across the country, double cropping is practiced, which is equivalent to short drainage (<180d) pre-season, although single cropping is also practiced is some cases (equivalent to long drainage pre-season >180d). Regarding the use of organic amendments, generally farmers in the Philippines use straw on season, and a very small group of farmers use other organic amendments, such as compost or manure[13]. In order to follow the logic of paragraph 17 of AMS-III.AU., ver. 03.0, emission factors will be developed only considering the use of rice straw on field as an organic amendment.

Therefore, the proposed standardized baseline will be applicable to the following types of transplanted rice fields in the Philippines that use straw on season as an organic amendment:

a) Irrigated rice fields that are continuously flooded on-season and where single cropping is practiced (g = 1);

b) Irrigated rice fields that are continuously flooded on-season and where double cropping is practiced (g = 2).

Establishment of the Values of the Baseline Emission Factor for field *g* in season *s*

[9] The same approach has also been taken in the development of version 3 of AMS-III.AU. Please see paragraph 18 of Information note "Top-down development of standardized approaches for determining methane emissions in rice field under AMS-III.AU." (https://cdm.unfccc.int/Panels/ssc_wg/meetings/036/ssc_036_an09.pdf)

[10] This is based on the third edition of the Rice Almanac (2002), page 118, second paragraph. See: [http://books.irri.org/0851996361_content.pdf]. It is noted that the fourth edition of the Rice Almanac (2013) does not provide agroecological zones anymore. For more information, see [http://books.irri.org/9789712203008_content.pdf]. It is further noted that HarvestChoice (http://harvestchoice.org/) provides only data for Africa, therefore it is not applicable for the case of this standardized baseline.

[11] Data updated for 2012 were directly provided in electronic form by the Bureau of Agricultural Statistics, Department of Agriculture, Philippines. The data were provided to the DOE for validation.

[12] Bouman et al. (2007) Water management in irrigated rice: Coping with water scarcity, IRRI, p.2 (http://books.irri.org/9789712202193_content.pdf)

[13] Confirmed through interviews. Interviews were conducted with the Dr. Rainer Wassmann and Dr. Bjoern Sander from the International Rice Research Institute, Mr. Mario Padrinao from the Bureau of Agricultural Statistics, Eng. Envangeline Sibayan from the Philippines Rice Research Institute, Dr. Nadine Ledesma from De La Salle University and Bayer Philippines trainers. These are leading experts for rice cultivation in the Philippines and in consultation with the DNA were identified as most relevant to provide input to the draft.

The baseline emission factors are calculated using the following formula adapted from IPCC 2006[14]:

$$EF_{BLs,g} = EF_c \text{ x } SF_p \text{ x } SF_w \text{ x } SF_o$$

Where:

$EF_{BL,s,g}$	Baseline Emission Factor
EF_c	Baseline emission factor for continuously flooded fields without organic amendments in the Philippines
SF_p	Scaling factor to account for the differences in water regime in the pre-season before the cultivation period
SF_w	Scaling factor to account for the differences in the water regime during the cultivation period
SF_o	Scaling factor to account for the organic amendments

The baseline emission factor for continuously flooded rice fields without organic amendments (EF_c) is determined based on national values derived from the measurements in five reference fields in Maligaya and Los Banos (Philippines). The measurements were done over nine cultivation seasons during the period of 1994 – 1998. Methane fluxes were determined with an automated closed chamber method. The system consists of a field chambers made of plexiglas, valve module, transfer module, injection module and a data analysis module (see Wassman et al. 2000 for details). The measurements are conducted in a manner that complies with the requirements in Appendix I of AMS-III.AU. (ver. 03.0). The early results covering the period up to the end of 1994, as well as earlier studies (e.g. Neue et al. 1994, Wassman et al. 1994), were summarized in Table 4-11 in Volume 2 of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories where seasonally integrated methane emission factors for continuously flooded rice fields without organic amendment in various locations of the world were presented.

[14] Volume 4: Agriculture, Forestry and Other Land Use, Section 5.5.2, p.5.48, Equation 5.2

TABLE 4-11 **SEASONALLY INTEGRATED METHANE EMISSION FACTORS FOR CONTINUOUSLY FLOODED RICE WITHOUT ORGANIC FERTILISER IN VARIOUS LOCATIONS OF THE WORLD**		
Country	Seasonally Integrated Emission Factor, EF[a] (g/m^2)	Literature/Remarks
Australia	22.5	NGGIC, 1996
China	13 (10-22)	Wassman et al., 1993a
India	10 (5 - 15)	Mitra et al., 1996 Parashar et al., 1996
Indonesia	18 (5 - 44)	Nugroho et al., 1994a,b
Italy	36 (17-54)	Schütz et al., 1989a
Japan	15	Minami, 1995
Republic of Korea	15	Shin et al., 1995
Philippines	(25 - 30)	Neue et al., 1994; Wassman et al., 1994
Thailand	16 (4 - 40)	Towpryaoon et al., 1993
USA (Texas)	25 (15 - 35)	Sass and Fisher, 1995
Arithmetic Mean[b]	20 (12-28)	-

[a] It is recognised that the emission factors presented in Table 4-11 will need to be periodically updated as better data become available. However, this dataset represents the best available information at the time of compilation.
[b] The arithmetic mean of the seasonally integrated emission factor, EF, is derived from the values shown in Table 4-11. The range of emission factors is defined as the standard deviation about the mean.

The country specific values for the Philippines reported in IPCC 1996 range from 25 – 30 g/m^2/season (250 – 300 kg/ha/season). Wasmann et al. (2000) and Corton et al. (2000) provided updated data from reference fields in the Philippines covering the entire period up to 1999. These updated data show that there are pronounced differences in the CH_4 emissions during the dry season (DS) and wet season (WS). The data for transplanted rice continuously flooded fields without organic amendments ($kgCH_4$/ha/season) is summarized in the table below.

Units: kgCH4/ha/season	**Year**	**Season**	**T1**	**T2**	**T3**	**T4**	**DS**	**WS**
Maligaya	1994	DS	95.00	67.00	67.00	104.00	83.25	
	1994	WS	266.00	230.00	225.00	241.00		240.50
	1995	DS	204.00	184.00	228.00	145.00	190.25	
	1995	WS	518.00	327.00	531.00	143.00		379.75
	1996	DS	160.00	420.00	178.00	308.00	266.50	
	1996	WS	272.00					272.00
	1998	DS	90.00				90.00	
Los Banos	1994	DS	227.00				227.00	
Average							171.40	297.42

The DS average value is below the lower end of the values quoted in the IPCC 1996 Guidelines, while the WS average value is within the proposed interval. These are the most current data in the Philippines and are also used for the establishment of this standardized baseline. It was also confirmed with Mr. Leandro Buendia, the author of the rice section of the Second National Communication of the Philippines to the UNFCCC (not published by the time of the submission of this draft standardized baseline) that the same data set was used in the SNC and this is the most current available data. Therefore, the above average values for wet and dry season will be applied in the establishment of the standardized baseline.

The International Rice Research Institute (IRRI) and the Philippine Rice Research Institute (PhilRice) continuously conduct further research on the topic and the results of their work will be reflected in the updates of the standardized baseline.

Regarding the scaling factors, Section 5.5.3. of Volume 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories state if no national factors are available, the default IPCC scaling factors[15] can be used. Therefore, the default scaling factors in IPCC 2006 (Vol. 4) are used for the establishment of this baseline.

The scaling factors for the water regime (SF_w) are based on Table 5.12 of IPCC 2006.

TABLE 5.12
DEFAULT CH_4 EMISSION SCALING FACTORS FOR WATER REGIMES DURING THE CULTIVATION PERIOD RELATIVE TO CONTINUOUSLY FLOODED FIELDS

Water regime		Aggregated case		Disaggregated case	
		Scaling factor (SF_w)	Error range	Scaling factor (SF_w)	Error range
Upland [a]		0	-	0	-
Irrigated [b]	Continuously flooded	0.78	0.62 - 0.98	1	0.79 - 1.26
	Intermittently flooded – single aeration			0.60	0.46 - 0.80
	Intermittently flooded – multiple aeration			0.52	0.41 - 0.66
Rainfed and deep water [c]	Regular rainfed	0.27	0.21 - 0.34	0.28	0.21 - 0.37
	Drought prone			0.25	0.18 - 0.36
	Deep water			0.31	ND

ND: not determined
[a] Fields are never flooded for a significant period of time.
[b] Fields are flooded for a significant period of time and water regime is fully controlled.
- Continuously flooded: Fields have standing water throughout the rice growing season and may only dry out for harvest (end-season drainage).
- Intermittently flooded : Fields have at least one aeration period of more than 3 days during the cropping season.
- Single aeration: Fields have a single aeration during the cropping season at any growth stage (except for end-season drainage).
- Multiple aeration: Fields have more than one aeration period during the cropping season (except for end-season drainage).

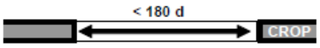
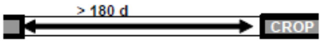
[c] Fields are flooded for a significant period of time and water regime depends solely on precipitation.
- Regular rainfed: The water level may rise up to 50 cm during the cropping season.
- Drought prone: Drought periods occur during every cropping season.
- Deep water rice: Floodwater rises to more than 50 cm for a significant period of time during the cropping season.

Note: Other rice ecosystem categories, like swamps and inland, saline or tidal wetlands may be discriminated within each sub-category.
Source: Yan *et al.*, 2005

[15] Volume 4: Agriculture, Forestry and Other Land Use, Section 5.5.2, p.5.51, see discussion on Tier 2 approach.–

The scaling factors for SF_p is based on Table 5.13[16] of IPCC 2006.

TABLE 5.13
DEFAULT CH_4 EMISSION SCALING FACTORS FOR WATER REGIMES BEFORE THE CULTIVATION PERIOD

Water regime prior to rice cultivation (schematic presentation showing flooded periods as shaded)		Aggregated case		Disaggregated case	
		Scaling factor (SF_p)	Error range	Scaling factor (SF_p)	Error range
Non flooded pre-season <180 d				1	0.88 - 1.14
Non flooded pre-season >180 d		1.22	1.07 - 1.40	0.68	0.58 - 0.80
Flooded pre-season (>30 d)[a,b]				1.90	1.65 - 2.18

[a] Short pre-season flooding periods of less than 30 d are not considered in selection of SFp
[b] For calculation of pre-season emission see below (section on completeness)
Source: Yan *et al*., 2005

The conversion factors for organic amendments are described in Table 5.14[17].

TABLE 5.14
DEFAULT CONVERSION FACTOR FOR DIFFERENT TYPES OF ORGANIC AMENDMENT

Organic amendment	Conversion factor (CFOA)	Error range
Straw incorporated shortly (<30 days) before cultivation[a]	1	0.97 - 1.04
Straw incorporated long (>30 days) before cultivation[a]	0.29	0.20 - 0.40
Compost	0.05	0.01 - 0.08
Farm yard manure	0.14	0.07 - 0.20
Green manure	0.50	0.30 - 0.60

[a] Straw application means that straw is incorporated into the soil, it does not include case that straw just placed on the soil surface, nor that straw was burnt on the field.
Source: Yan *et al*., 2005

Based on the IPCC 2006 guidance[18] for calculation of SF_o and Annex 9 to the report of the 36th Meeting of the Small-Scale Working Group[19], the scaling factor for organic amendments (straw) (SF_o) is applied as follows:

Single crop	1.70
Double crop	2.88

[16] IPCC 2006, Volume 4: Agriculture, Forestry and Other Land Use, Section 5.5.2, p.5.50
[17] IPCC 2006, Volume 4: Agriculture, Forestry and Other Land Use, Section 5.5.2, p.5.51
[18] Volume 4: Agriculture, Forestry and Other Land Use, Section 5.5.2, p.5.50, Equation 5.3.
[19] https://cdm.unfccc.int/Panels/ssc_wg/meetings/036/ssc_036_an09.pdf

Using the above factors results in the following baseline emission factors for continuously flooded rice fields for the dry and wet seasons:

Dry Season

	EFc	Baseline			
		SFw	*SFp*	*SFo*	*Emission Factor*
For double cropping	171.40	1.00	1.00	2.88	**493.63**
For single cropping	171.40	1.00	0.68	1.70	**198.14**

Wet Season

	EFc	Baseline			
		SFw	*SFp*	*SFo*	*Emission Factor*
For double cropping	297.42	1.00	1.00	2.88	**856.56**
For single cropping	297.42	1.00	0.68	1.70	**343.81**

Using the scaling factors described in Table 5.12, Table 5.13 and Table 5.14 of IPCC 2006 for single and double aeration, it is also possible to arrive at project emission factors and emission reduction factors respectively, as shown in the tables below.

Dry Season

	EFc	Baseline				Project Scenarios	Project				Emission Reduction Factor
		SFw	SFp	SFo	Emission Factor		SFw	SFp	SFo	Emission Factor	
For double cropping	171.40	1.00	1.00	2.88	493.63	Scenario 1: Change the water regime from continuously to intermittent flooded conditions (single aeration)	0.60	1.00	2.88	296.18	197.45
						Scenario 2: Change the water regime from continuously to intermittent flooded conditions (multiple aeration)	0.52	1.00	2.88	256.69	236.94
For single cropping	171.40	1.00	0.68	1.70	198.14	Scenario 1: Change the water regime from continuously to intermittent flooded conditions (single aeration)	0.60	0.68	1.70	118.88	79.26
						Scenario 2: Change the water regime from continuously to intermittent flooded conditions (multiple aeration)	0.52	0.68	1.70	103.03	95.11

Wet Season

	EFc	Baseline				Project Scenarios	Project				Emission Reduction Factor
		SFw	SFp	SFo	Emission Factor		SFw	SFp	SFo	Emission Factor	
For double cropping	297.42	1.00	1.00	2.88	856.56	Scenario 1: Change the water regime from continuously to intermittent flooded conditions (single aeration)	0.60	1.00	2.88	513.94	342.62
						Scenario 2: Change the water regime from continuously to intermittent flooded conditions (multiple aeration)	0.52	1.00	2.88	445.41	411.15
For single cropping	297.42	1.00	0.68	1.70	343.81	Scenario 1: Change the water regime from continuously to intermittent flooded conditions (single aeration)	0.60	0.68	1.70	206.29	137.53
						Scenario 2: Change the water regime from continuously to intermittent flooded conditions (multiple aeration)	0.52	0.68	1.70	178.78	165.03

Use of the proposed standardized baseline with the approved methodology

The Standardized Baseline shall be used for any project based in the Philippines that applies the approved methodology AMS-III.AU., "Methane emission reduction by adjusted water management practice in rice cultivation", and uses the approach of calculating emission reductions using the approach described in paragraphs 6 - 13. The values described above will be used for the values of $EF_{B,s,g}$ and $EF_{P,s,g}$ In addition, to the applicability conditions described in the methodology, the following conditions apply:

I. The standardized baseline is applicable to the following types of rice fields in the Philippines that use straw on season as an organic amendment:

a) Irrigated rice fields that are continuously flooded on-season and where single cropping is practiced (g = 1);

b) Irrigated rice fields that are continuously flooded on-season and where double cropping is practiced (g = 2).

II. The baseline applies to transplanted rice farms that change the water regime during the cultivation period from continuous to intermittent flooded conditions/alternating wetting and drying (single aeration and multiple aeration).

III. The rice fields use straw as an organic amendment. Other organic amendments such as compost , farm yard manure and green manure, which have been used in the baseline may continue to be used in the project at the same or lower rate.

Validity of the proposed standardized baseline

The data vintage used for establishing a country specific emission factor for rice cultivation in the Philippines based on Wasmann et al. (2000) and Corton et al. (2000), as well as the scaling factors described in the 2006 IPCC Guidelines for National GHG Inventories.

The validity of the Standardized Baseline is three (3) years from the time of its adoption.

The baseline will be updated based on new research and publications available at the time of baseline update. In case no updated research is available, the validity of the baseline will be extended for additional period of three (3) years. The Philippine Rice Research Institute will work with the DNA of the Philippines in establishing the updated baseline emission factors. Factors that are not based on peer reviewed research shall not be used.

Deviations from the approved methodology (if applicable)

Not applicable.

References and any other information

The following documents are referred to:

1) Wassman et al. (1994) Temporal patterns of methane emissions from wetland rice fields treated by different modes of N application, Journal of Geophysical Research, vol. 99, p. 16,457-16,462

2) Wassman et al. (2000) Characterization of methane emissions from rice fields in Asia, Nutrient Cycling in Agroecosystems 58: 1-12

3) Corton et al. (2000) Methane emissions from irrigated and intensively managed rice fields in Central Luzon (Philippines), Nutrient Cycling in Agroecosystems 58: 37-53

4) IPPC Guidelines 1996

5) IPCC Guidelines 2006

6) Bouman et al. (2007) Water management in irrigated rice: Coping with water scarcity, IRRI

SECTION C: PROPOSED STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED TOOL

Not applicable.

Applicability of the proposed standardized baseline

Not applicable.

Baseline emission factor estimation

Not applicable.

Validity of the proposed standardized baseline

Not applicable.

Deviations from the approved tool (if applicable)

Not applicable.

References and any other information

Not applicable.

SECTION D: PROPOSED STANDARDIZED BASELINE DEVELOPED USING THE "GUIDELINE: ESTABLISHMENT OF STANDARDIZED BASELINES FOR AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM"

Applicability of the proposed standardized baseline

Not applicable.

Additionality demonstration

Not applicable.

Baseline identification

Not applicable.

Baseline removals estimation (if applicable)

Not applicable.

Land eligibility demonstration (if applicable)

Not applicable.

Validity of the proposed standardized baseline

Not applicable.

Deviations from the guideline (if applicable)

Not applicable.

References and any other information

Not applicable.

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Document information

Version	*Date*	*Description*
02.0	1 December 2013	The document title has changed from “Proposed standardized baseline form” (F-CDM-PSB) to “Proposed standardized baseline submission form” (CDM-PSB-FORM). Revision to: • Reflect updated requirements in the “Procedure: Development, revision, clarification and update of standardized baselines” • Include editorial improvement
01.0	23 March 2012	Initial publication.

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