

Agenda item 4.1.

Paragraph 22 of the annotated agenda

NM108: Emission reduction by application of Dry-cultivated Water-saving and Drought-resistance Rice (D-WDR) in rice cultivation

CDM EB 125

Bonn, Germany, 11-13 June 2025



Procedural background

- SSC-NM108 was received on 21 December 2022.
- The MP worked on the draft methodology at MP90, MP91 and MP93, and agreed to recommend the methodology for approval by the Board.
- At EB121, the Board considered the proposed methodology and identified issues to be addressed by the MP.
- The MP worked on the draft methodology at MP94, MP95 and MP96, and agreed to recommend the methodology for approval by the Board.
- At EB124, the Board considered the proposed methodology and identified further issues to be addressed by the MP.
- At MP97, the MP addressed the issues raised and agreed to recommend the methodology for approval by the Board.



Purpose

The methodology applies to project activities introducing Dry-cultivated Water-saving and Drought-resistance rice (D-WDR) in existing flooded rice cultivars.



Applicability conditions

- The baseline involves irrigated, flooded fields for an extended period of time (demonstrated for each field).
- Project activities shall be implemented in upland areas. The methodology does not apply to upland rice or rainfed rice and deep-water rice farms.
- It is demonstrated that the project cultivar achieves at least the same level of yield as the baseline cultivar.
- The implementation of the project activity does not require changes in the original farmland management practices.
- The cultivation practices are not subject to any regulatory restrictions, and crop protection products (herbicides or pesticides) do not exceed any regulatory thresholds or standards.
- Double counting of emission reductions is avoided through a contractual agreement with the owner of the land/cultivar.



Baseline emissions

$$BE_y = \sum_s BE_s$$

$$BE_s = \sum_g (BE_{s,CH_4} + BE_{s,N_2O})$$

$$BE_{s,CH_4} = \sum_{g=1}^G EF_{BL,s,g,CH_4} \times \min(A_{s,g}, A_{s,bsl}) \times 10^{-3} \times GWP_{CH_4}$$

$$BE_{s,N_2O} = \sum_{g=1}^G EF_{BL,s,g,N_2O} \times \min(A_{s,g}, A_{s,bsl}) \times 10^{-3} \times GWP_{N_2O}$$

The baseline emission factor shall be determined as per one of the following approaches (in order of priority):

- (a) Measurement on reference fields;
- (b) Calculation based on regional or global default values.



Project emissions

$$PE_y = \sum_s PE_s$$

$$PE_s = \sum_s (PE_{s,CH_4} + PE_{s,N_2O})$$

$$PE_{s,CH_4} = \sum_{g=1}^G EF_{PJL,s,g,CH_4} \times A_{s,g} \times 10^{-3} \times GWP_{CH_4}$$

$$PE_{s,N_2O} = \sum_{g=1}^G EF_{PJ,s,g,N_2O} \times A_{s,g} \times 10^{-3} \times GWP_{N_2O}$$

- The project emission factor shall be determined following the same approach as in the baseline (measurement on reference fields or based on default values).
- The project participants shall take into account potential losses of soil organic carbon (SOC) caused by the implementation of the project activity



Key issues and proposed solutions

The MP revised the methodology addressing the key issues from EB 121 and EB 124 as follows:

- The term “cultivation practice” is consistently used, replacing the terms “cultivation pattern”, “cultivation method” and “farmland management practices” in the original submission;
- The introduced cultivation practices are not subject to any regulatory restrictions, and crop protection products (herbicides or pesticides) do not exceed any regulatory thresholds or standards;
- The use of the DNDC model was removed as an option from the methodology. Flexibility for the selection of the EF method is introduced and the prioritization of methods has been removed;



Key issues and proposed solutions (2)

- A conservative approach for the baseline and project emission factor takes into account the uncertainty (lower bound for BE and upper bound for PE);
 - Provisions to calculate PE from potential losses of soil organic carbon (SOC) are introduced. The guidance for SOC measurements has been improved, including reference to ISO and FAO protocols. The clarity of the approach has been enhanced and a specific monitoring parameter has been included;
 - The guidance for the determination of the reference fields has been consistently applied, including guidance for the sizing of the fields;
 - It shall be demonstrated that the project cultivar achieves at least the same level of yield as the baseline cultivar (provisions for LE have been removed).
-



The new methodology will allow the estimation of emission reductions for project activities implementing Dry-cultivated Water-saving and Drought-resistance rice (D-WDR).



Recommendations to the Board

The MP recommends that the Board adopt the new small-scale methodology.

