United Nations Framework Convention on Climate Change

Agenda item 3.4.
Paragraph 18 of the annotated agenda

Methodological tool: Fraction of non-renewable biomass

Article 6.4 Supervisory Body – SBM Briefing on the outcomes of MEP 012 and MEP 013

Bonn, Germany, 13 May 2026

UNFCCC Secretariat
Mitigation Division

Procedural background

- The Supervisory Body of the Article 6.4 mechanism, at its fifteenth meeting, approved its workplan for 2025 for the Methodological Expert Panel (MEP) and requested the MEP to continue working on the revision of the Clean Development Mechanism (CDM) methodologies, methodological tools, standards and guidelines, including the tool for the fraction of non-renewable biomass (fNRB).

- MEP 011 considered the draft “Tool: Fraction of non-renewable biomass” and agreed to seek input from stakeholders on the draft version of the methodological tool.

- Call for public inputs was launched from 3-24 Feb 2026.

- MEP 012 considered the public inputs (*presented to the SBM post MEP 012*) and adjusted the draft tool for recommendation to the Board.

Purpose & Overview of the Tool

- This methodological tool provides default values for the fraction of non-renewable biomass (fNRB) at sub-national, national and multi-national levels for Asia, Latin America and Sub-Saharan Africa.

- Activity participants shall apply the default values in accordance with the requirements in the mechanism methodology referring to this methodological tool. The default values shall only be used to calculate emission reductions through 31 December 2029.

- The default values for fNRB,y at multi-national and national levels are the same as the values listed in the “Methodological tool: Default values for common parameters” (CDM TOOL33) under the CDM. All default values, including the values for sub-national jurisdictions, are based in substantial part on the report by Ghilardi & Bailis (2024).

Overview of the Tool

- The uncertainty associated with each of the default values is deemed as +- 30% of the default value at a 95 per cent confidence level.

- As an interim measure, this uncertainty is set by the MEP. The uncertainty estimate was informed by a review of external expert information regarding the uncertainty of the 2024 version of the MoFuSS model, its parametric inputs, and its outputs, and will be further refined in time.

What is fNRB?

Definitions included:

- **Fraction of non-renewable biomass**: The proportion of harvested biomass that exceeds the natural rate of regeneration of the landscape during a given period. *(Different from the CDM definition in TOOL30)*

- *This change reflects the fact that in MoFuSS, fNRB is no longer defined as a ratio between non-renewable biomass consumption and total biomass consumption, but instead as the relative amount of wood (non-renewable biomass) that is harvested above the landscape's natural rate of regeneration, as expressed through above-ground net biomass growth rates.*

- **Harvested biomass:** Above-ground woody biomass collected or cut from living trees for use as fuelwood or for conversion to charcoal for use as fuel

  (Not defined explicitly in the CDM)

Applicability

This methodological tool is only applicable where a mechanism methodology specifies:

- How the parameter fNRBy is used in the mechanism methodology;
- Whether activity participants shall apply a sub-national, national or multi-national default value or the conditions for selecting among these alternatives, including a justification for why a geographically narrower or broader option is selected based on the characteristics of the fuel(s) involved in an Article 6.4 activity; and
- How activity participants shall consider the uncertainty associated with the values of fNRBy.

- Mechanism methodologies may provide further specifications and requirements for how this methodological tool shall be applied by activity participants in the context of the type of mitigation activities covered by the mechanism methodology and in the context of programmes of activities.

Further provisions

- Stakeholders, DNAs may propose revisions to these values through a request for revision to this methodological tool or may submit new proposed mechanism methodologies or methodological tools for determining fNRB values that result in further advancements in terms of accuracy and conservativeness, for consideration by the Supervisory Body using A6.4- PROC-METH-001.

- DNAs may also submit standardized baseline values for fNRB, using the “Procedure: Development, revision, clarification and update of standardized baseline” (A6.4-PROC-METH-002), for example, if in the future this tool includes a procedure to calculate values for the fraction of nonrenewable biomass.

Impacts

- This methodological tool provides default values for fNRB will facilitate the implementation of Article 6.4 activities that reduce emissions from the use of harvested biomass fuels, such as clean and efficient cooking activities

Subsequent work and timelines

- The MEP will consider updates to this methodological tool based on future data and methodological developments no later than three years after its initial adoption, noting that the scope of work to take into consideration future updates and development of fNRB value addressing uncertainties, etc., will require external technical expertise.

Recommendation

- The MEP recommends that the Supervisory Body adopt the draft methodological tool.
- The MEP seeks a mandate from the Supervisory Body to:

a) Revise the methodological tool to
   - ➢ include default values for fNRB for further countries, and
   - ➢ conduct further analysis of the potential to apply the MoFuSS default scenarios version or user-defined scenarios version; and

b) Revise the methodological tool once new data and methods to calculate the fraction of non-renewable biomass become available and update the uncertainty estimates of the default values for fNRB, not later than three years after initial adoption of the methodological tool

Stakeholder comments received as part of inputs to SBM021 Annotated agenda

- Call for inputs was open from 27 April - 6 May 2026.
- Two stakeholders (Carbon Market Watch; Green Farm CO2FREE) submitted a total of 13 comments.

	Stakeholder inputs (brief overview)	Clarification/Response
1	Recommend that the SBM retain the methodological tool's exclusion of wood-to-charcoal conversion factors as suggested by comments.	Indeed, conversion factors are not included in this recommended version.
2	Validity of tool- Requests the tool to be updated whenever the MoFuSS model is revised, ideally evolving into a dynamic database of default values.	The tool includes the requirement for update in three years or less from the date of approval of the tool (accelerated from the standard 5 year validity). The MEP foresees priority areas for update and seeks a mandate from the SB for these updates (paragraphs 35(a) and (b) of the cover note). Preferable to retain the current formulation that leaves the timing of updates to the PACM governance.

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	Stakeholder inputs (brief overview)	Clarification/Response
3	Proposes adding justification requirements in the tool for the selection of the geographical scale if made by the methodology proponent or by the activity participant.	Propose that the specificities remain in the mechanism methodology and provide associated requirements as they relate to the conditions for A6.4 Activities detailed in the methodology. For example, the MEP has included methodological conditions for choosing the correct fNRB default value in Draft Methodology: Energy efficiency measures in household cooking, paragraphs 22 & 23.
4	Urge the SBM to use the full set of default values stipulated in Ghilardi & Bailis (2024), which includes some degree of trade.	Trade is indeed an issue and relates to the selection of fNRB values from the tool, but the MEP proposes to include detailed requirements at the methodology level. The MEP included methodological conditions for choosing the correct fNRB default value including in the case of international trade of wood fuels in Draft Methodology: Energy efficiency measures in household cooking, paragraphs 13(c), 22 & 23.

Stakeholder comments received as part of inputs to SBM021 Annotated agenda

	Stakeholder inputs (Brief overview)	Clarification/Response
5	Unclear why the tool does not adopt the values in their entirety. We found that the tool's values are identical to those in the CDM TOOL33. Observed that 46 of the 72 national values in TOOL33 are higher than what is determined in Ghilardi & Bailis (2024). This has a direct impact on issuance volumes: inflating and producing less conservative results. With only 17 values lower and 9 identical, this pattern clearly violates conservativeness principles outlined in the TOOL33's own Appendix 2. There is no logical explanation for this, and the tool failed to provide evidence or documented justification for these deviations.	The default values in the recommended tool differ slightly from the values reported in Ghilardi & Bailis (Oct 2023 & June 2024) because posterior to their final report, the CDM Methodologies Panel received further stakeholder feedback, received requests and questions from the CDM Executive Board, and held interactions with that report's authors that resulted in further refinements to obtain the most defensible and reliable values possible. This process is described in CDM documentation, for example, MP97 Annex 8 - Information note: Development of default values for fraction of non-renewable biomass, which was considered by the CDM Executive Board at EB125 in June 2025 prior to adopting the tool containing the fNRB national default values at that meeting.

Stakeholder comments received as part of inputs to SBM021 Annotated agenda

	Stakeholder inputs	Clarification/Response
6-8	Recommend that the tool incorporate the urban fNRB values where appropriate. These are also provided in Ghilardi & Bailis (2024), but omitted in the tool despite being highly relevant. This excerpt of Ghilardi & Bailis (2024) emphasizes the importance of including urban values in the tool: "[...] commercially harvested urban woodfuels tend to drive degradation more than woodfuels harvested for subsistence use by rural households because commercial extraction is more intense and spatially focused [36]. We estimate urban fNRB by assuming urban woodfuels originate from high-fNRB administrative units in rural areas and define urban fNRB in each country as the average of the upper 50% percentile of all rural administrative units."	The estimates for urban areas in Ghilardi & Bailis 2024 were based on assumptions derived from observations in very limited countries, not on observed data on wood sourcing for charcoal; hence, the urban values were considered contentious and highly uncertain and not included in the CDM tool. (Clarification included in CDM MP 97 Annex 08). The MEP recognises the importance of selecting the most representative and conservative fNRB value, including the consideration of rural versus urban wood fuel demand, and has proposed to include the specific instructions on how to select the most appropriate fNRB value at the methodology level. The MEP included methodological conditions for choosing the correct fNRB default value in Draft Methodology: Energy efficiency measures in household cooking, paragraphs 22 & 23.

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	Stakeholder inputs	Clarification/Response
9	Current fNRB logic focuses on "avoided loss." By including HWP, the tool acknowledges that harvesting for long-lived products is a sustainable use of biomass that creates a "sink" outside the forest, which should not be penalized as non-renewable.	Not relevant and no change required. fNRB considers biomass harvest by households and other users for fuel as the basis of potential biomass loss. Storage in harvested wood products is not part of the inputs to determining how much biomass is harvested but not replaced due to biomass harvesting for fuel.
10	MoFuSS often assumes subsistence use. In developing countries, intensive land use for HWP increases the "Natural Regeneration" rate which should lower the fNRB and increase the credit potential for managed forests.	No change required. Regeneration rates in the model are not disaggregated to catch the impact of individual intensive silviculture plantations. Furthermore, the fNRB is not used for setting a baseline for carbon crediting from a change from unmanaged to managed forests.

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	Stakeholder inputs	Clarification/Response
11	The default values in the Annex (e.g., for provinces in Zambia or Vietnam) are static. If a project introduces intensive HWP production that improves forest health, they should be allowed to use a project-specific fNRB that reflects their superior land management.	Not relevant; fNRB is not applied to renewable biomass from managed land. The characteristics of renewable biomass will be determined via different tools, methodologies, criteria and requirements. Furthermore, the MEP recognises that there may be ways to improve fNRB, for example by applying dynamic methods for its estimation, and has recommended to continue work on such improvements.
12	In many developing countries, the fNRB is high because of unmanaged use. Highlighting that intensive HWP use is a solution to non-renewable harvesting helps align carbon finance with industrial development. Encourage DNAs to submit values that specifically distinguish between "unmanaged degradation" and "planned HWP extraction."	Not relevant and no change required. fNRB considers biomass harvest by households and other users for fuel as the basis of potential biomass loss. Storage in harvested wood products is not part of the inputs to determining how much biomass is harvested but not replaced, as a result of biomass harvesting for fuel

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	Stakeholder inputs	Clarification/Response
13	This allows HWP projects to argue that their "Managed fNRB is significantly lower, thereby proving their "Additionality" and "Net Removal" capability compared to the regional average.	No change required. The fNRB is not used for setting a baseline for carbon crediting from a change from unmanaged to managed forests. The MEP is at work on different tools, methodologies, criteria and requirements for A6.4 activities focused on removals.

Conclusion: The inputs received do not require any change or update to the fNRB Tool recommended to the SBM.

Thank you