	CALL FOR INPUT
Name of submitter	Laurent Perrinjaquet
Affiliated organization of submitter	The Project Developer Forum (PD Forum)
Email of submitter	laurent.perrinjaquet@burnmfg.com
Date of submission	24/02/2026

Document reference number and title: (Recommendation from the MEP to SBM020) **A6.4 MEP011-A04: Draft Methodological tool: Fraction of non-renewable biomass (version 01.0)**				
Item	**Section no.** (as indicated in the document)	**Paragraph/Table/Figure no.** (as indicated in the document)	**Comment** (including justification for change)	**Proposed change** (including proposed text)

1	COVER NOTE	8	Consideration of dynamic fNRB and system boundary in ER accounting While the draft A.6.4. tool focuses on improving the estimation of default fNRB values, a more fundamental issue arises when it comes to ER accounting of cookstove activities as the fNRB is used as a fixed ex-ante parameter. Using MoFuSS definition, fNRB represents the imbalance between biomass harvesting and the landscape's natural regeneration. Any project that reduces woodfuel demand necessarily modifies this balance. Consequently, fNRB should not be assumed to remain identical in baseline and project scenarios. This revision has two implications for the design of scenarios with and without projects: 1. Dynamic fNRB considerations: A reduction in biomass demand decreases the over-harvesting, thereby generally lowering fNRB in the project scenario. This variation contributes to additional emission reductions. 2. Revision of the project system: Because fNRB is calculated at landscape level (including households beyond project participants), any project-induced change in fNRB affects the emissions of both project and non-project households relying on the same biomass supply pool. This implies that all those households (from the area used to calculate fNRB) will reduce their emissions because their fNRB changes. Current methodologies capture only the direct reduction in consumption among project households. They do not account for the additional mitigation effect resulting from the variation of fNRB for the broader population included in the original fNRB assessment boundary. A proposed revision of ER formulas are found in the document outlining the approach in more details: https://drive.google.com/drive/folders/1Je11X8pwFhaskjBv9zvqJOI7vW1Z7D5F?usp=sharing Modelling tools such as MoFuSS already make this adjustment technically feasible without fundamentally redesigning existing methodological structures.	"In line with the paragraph 8 of the Cover Note, we therefore invite the MEP to consider whether future Article 6.4 methodologies should incorporate an additional ER term reflecting: • the dynamic adjustment of fNRB in the project scenario; and • the resulting emission impact on non-project households within the fNRB assessment boundary. Recognizing this positive contribution would enhance conceptual consistency between the definition of fNRB and its application in ER equations and reduce the risk of systematic under-crediting of large-scale clean cooking interventions. In this context, we also recommend that the MEP allow sufficient flexibility under Article 6.4 to use scenario-based and localized MoFuSS calculations where appropriate, rather than relying exclusively on fixed default values until the next revision of the tool in three years. While default values provide simplicity and predictability, dynamic and localized modelling should remain possible where it improves accuracy and environmental integrity."
2	DEFINITIONS	6	"Clarification on the definition of fNRB The proposed definition of renewable biomass (RB) in section 2.2 paragraph 6 (b) of the draft tool originates from CDM EB23 Annex 18 (February 2006). https://cdm.unfccc.int/EB/023/eb23_repan18.pdf Subsequent CDM methodological	To ensure methodological coherence and avoid ambiguity, we recommend that the definition of fNRB in the Article 6.4 tool be explicitly aligned with the definition used in MoFuSS documentation – with a clear definition of the scope (local vs landscape) and the carbon pools. A common and consistent definition is

			developments had modified this original definition: • Earlier versions of AMS-I.E and AMS-II.G (2012) introduced the concept of demonstrably renewable biomass, refining non-renewable as non-sustainable harvesting, until some defined conditions were met https://cdm.unfccc.int/UserManagement/FileStorage/VZ79PF8XU2M4DCT1INY5A3BSJOGQ6H • Later, CDM Tool 30 further redefined the assessment of non-renewable biomass by quantifying NRB as the imbalance between biomass consumption and forest growth (based on the mean annual increment) in a defined area (no requirement to demonstrate non-sustainable harvesting). https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v4.0.pdf The fNRB is further defined as "the fraction of woody biomass saved by the Article 6.4 activity during year y that cannot be established as renewable biomass." This means that fNRB is defined as the local level, as the contribution of pre-project consumption to the permanent loss of biomass. However, this definition of fNRB is different from the definition of fNRB as calculated by the various models. There is a risk of using the same fNRB terminology for different concepts that may not represent the same thing. Under the proposed Article 6.4 draft tool, default fNRB values are derived from the MoFuSS modelling tool (Ghilardi & Bailis, 2024 https://zenodo.org/records/14291479). MoFuSS is a bottom-up spatial model that runs multi-year simulations (not snapshot), which incorporate dynamic variables like population growth, urbanization and land cover change. It uses biomass growth functions to estimate regeneration rates, rather than relying on simplified parameters such as mean annual increments. In this context, the authors define fNRB as "a measure of the relative amount of wood that is harvested above the landscape's natural rate of regeneration". Furthermore, according to Ghilardi & Bailis (2024, paras. 2.6.1 and 2.6.2), the current model boundary is limited to above-ground woody biomass and does not include soil organic carbon (SOC), belowground biomass or dead organic matter (DOM) in the calculation of fNRB (unlike the proposed	essential given that the default values are directly derived from that modelling tool.

Document reference number and title: (Recommendation from the MEP to SBM020)

A6.4 MEP011-A04: Draft Methodological tool: Fraction of non-renewable biomass (version 01.0)

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
			definition in the Article 6.4 tool). Thus, fNRB in MoFuSS is defined at landscape level, with specific pools of carbon, and based on the overall consumption of a population. "	
3	COVER NOTE	Section 5	We recognize that further improvements to the MoFUSS model and the current tool may take time. Nevertheless, we strongly believe that it would be feasible and essential to resume the work on the development of sub-national fNRB defaults values, which could substantially improve integrity through enhanced accuracy, while improving overall project feasibility. There is no need to wait for the next revision of the tool (three years) to begin formal work on this matter.	Include the following text: request the MEP in conjunction with the MoFUSS team to develop subnational values within the scope of the current tool and recommend an approach for inclusion of such defaults values in the current tool.
4	NORMATIVE AND INFORMATIVE REFERENCES	Section 4	The tool mentions that DNAs/Stakeholders may propose revisions to the default values through a request for revision or may submit new tools for determining fNRB values that result in further advancements in terms of accuracy and conservativeness. However it does not explicitly mention the possibility of the direct application of more recent/accurate inputs to MoFUSS, based on more recent locally/nationally data, which could lead to more accurate values. It would be important to provide clarity to this possibility so that countries and other relevant stakeholders are encouraged to develop better primary/secondary sources and apply improved input parameters to MoFUSS with a view of using the resulting fNRB defaults immediately.	Include the following text: clarifies that DNAs/Stakeholders may develop national or locally applicable studies, including research on input parameters, and apply such updated parameters to the MoFUSS model, with a view of obtaining more accurate fNRB defaults, subject to validation by VVBs and the SB.

Document reference number and title: (Recommendation from the MEP to SBM020)

A6.4 MEP011-A04: Draft Methodological tool: Fraction of non-renewable biomass (version 01.0)

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
5	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	14	Lack of Regional Variation in WCCF Defaults The default WCCF of 4:1 does not reflect regional variation in kiln types, wood moisture content, or traditional vs. improved carbonization technologies. Field studies and national surveys (e.g., in Kenya, Rwanda, Ghana) show WCCF ranging from 4.5 to 7.5 in traditional systems and 3.5–4.5 in improved kilns. Here is a list of publications that reflect the discrepancy observed here: https://docs.google.com/spreadsheets/d/1dHAHMSruYombgBoitCm5PCNsZvQP6It8/edit?usp=drive_link&ouid=113750626920219758095&rtpof=true&sd=true	Provide region-specific default WCCF values or allow country-specific values to override the default when supported by peer-reviewed or Host Country-endorsed data.
6	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	14	Conflict with Host Country Defaults or Surveys Several Host Countries have issued national energy statistics or biomass conversion studies with different WCCF values. Using a flat global default risks misalignment with national MRV systems and could undermine host country ownership.	Allow substitution of the default with Host Country-approved WCCF values, where documented through credible and peer-reviewed national studies or public energy surveys.
7	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	14	No Guidance on Fuelwood Basis (Wet vs. Dry) The default WCCF of 4.0 (wet basis) does not clarify the assumed moisture content range of the input wood, which can vary substantially across geographies and seasons.	Clarify the assumed moisture content (e.g., 20%, 30%) and provide a sensitivity range or conversion method to adjust the WCCF accordingly in cases where field data are reported on a dry basis.
8	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	KPT data submitted by developers shows much higher fuelwood consumption than the assumed 0.4 t/person/year in MoFuSS. Ignoring this leads to underestimation of emissions.	Incorporate KPT data submitted by the PD Forum and other country-specific surveys as default or adjust the default to reflect this wider dataset (e.g., SSA: 0.71 t/person/year).
9	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	MoFuSS values rely on outdated datasets (>10 years old), yet the model is presented as generating national defaults. This undermines credibility unless local data inputs are integrated.	Enable project developers to submit updated, locally validated biomass stock data. Only release national defaults when current data (e.g. post-2020) are used or validated.
10	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	The current definition of fNRB focuses on total harvest, not marginal reductions. This departs from the approach in AMS-II.C, risking misalignment with efficiency methodologies.	Support generation and use of marginal fNRB values using MoFuSS scenarios that compare business-as-usual vs. intervention scenarios.

Document reference number and title: (Recommendation from the MEP to SBM020)

A6.4 MEP011-A04: Draft Methodological tool: Fraction of non-renewable biomass (version 01.0)

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
11	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	The current definition of fNRB focuses on total harvest, not marginal reductions. This departs from the approach in AMS-II.C, risking misalignment with efficiency methodologies.	We need a dedicated budget and project plan to develop a MoFuSS based marginal approach for fNRB which will represent the impact of a cookstove project more accurately
12	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	TOOL 33 currently reflects average fNRB across total national/regional harvest. However, carbon projects reduce biomass usage at the margin—they displace the most recent, incremental harvesting that would otherwise occur.	Allow for use of marginal fNRB values, justified using credible models (e.g., MoFuSS), to reflect the emissions avoided by project activities more accurately.
13	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	MoFuSS excludes biomass from land clearance (e.g., for agriculture) despite its contribution to fuelwood. This contradicts observed field dynamics in Sub-Saharan Africa.	Include deadwood and deforestation by-products as a parameter contributing to renewable biomass or justify their exclusion quantitatively.
14	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	15	MoFuSS (Model for Fuelwood Supply and Sustainability) provides a dynamic, spatially explicit and temporally sensitive modelling approach to estimating fNRB. Unlike static national averages, MoFuSS integrates: - Land cover changes - Biomass regeneration - Demographic pressure - Urban-rural demand gradients - Trade dynamics MoFuSS can be run to produce subnational, marginal, and temporally updated fNRB values that respond to actual landscape and energy trends, rather than frozen default snapshots. The ICVCM and Gold Standard have already adopted MoFuSS-derived values as the basis for future fNRB default generation. Aligning Tool 33 with this approach promotes inter-standard harmonization, minimizes conflict, and supports cross-use of data.	In recognition of the evolving research into fNRB, include a provision allowing project developers to propose MoFuSS-derived fNRB values, provided they are transparently documented and validated through, in line with the evolving practices and using robust reference data
15	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	Table 3	Without disaggregated urban fNRB defaults, urban projects face undercalculation of their true avoided emissions, making them economically non-viable despite their real climate benefit.	Integrate or allow the use of urban-specific fNRB default values for densely populated municipalities where charcoal or fuelwood supply chains are documented to originate from non-renewable sources. Alternatively, require projects to demonstrate urban-specific supply dynamics using tools like MoFuSS or official supply chain data.

Document reference number and title: (Recommendation from the MEP to SBM020)

A6.4 MEP011-A04: Draft Methodological tool: Fraction of non-renewable biomass (version 01.0)

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
16	DEFAULT VALUES FOR FRACTION OF NON-RENEWABLE BIOMASS	Table 3	The tool currently lacks flexibility to incorporate dynamic and project-specific fNRB values generated using spatial models such as MoFuSS. Gold Standard already supports MoFuSS-derived defaults and this should be mirrored in Tool 33 to maintain harmonization.	Include a clause allowing the use of MoFuSS-derived fNRB values by project developers, subject to transparent documentation and alignment with host country and UNFCCC validation frameworks.