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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/1Je11 X8pwFhaskjBv9zvqJOI7vW1Z7D5F?usp=sh aring 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 | 2.2.b & 2.2.c | 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. |

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			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	APPLICABILITY	5.5	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