Responses to public comments on
"Standardized approaches for baseline emission calculations under SSC CDM methodologies for displacement of non-renewable biomass"

I. Background

1. The CDM Executive Board (the Board), at its sixty-third meeting, launched a call for public input from **30 September 2011** to **30 October 2011** on the standardized approaches for simplifying baseline emission calculations in AMS-I.E "Switch from non-renewable biomass for thermal applications" and AMS-II.G "Energy efficiency measures in thermal applications of non-renewable biomass", focusing on:

(a) Approaches for deriving regional/country specific values for the fraction of non-renewable biomass;

(b) Default parameters for baseline fuelwood consumption per capita.

2. In total five public submissions were received from stakeholders. The SSC WG at its thirty fifth meeting thanked the authors of the submission. In addition the following responses were prepared by the Secretariat and the SSC WG on some of the issues raised in particular those related to paragraph 1 (a) above.

II. Summary of public comments and responses by the SSC WG

Issues raised regarding the approach based on Wood Integrated Supply/Demand Overview Mapping (WISDOM):

	Public comments:	**Responses:**
WISDOM approach	There is a need to simplify the documentation of the WISDOM approach and make it user friendly and accessible to project participants with limited technical background, for example, better explanation of Sustainable Increment Approximation Fraction (SIAF) and other concepts used in the model may be required along with a comprehensive revision of the documentation of WISDOM approach.	SSC-WG agrees while there may be room for simplifying the WISDOM model, there is already an extensive and publicly accessible information about the WISDOM approach and its application to many case studies around the world (see for example, the site www.wisdomprojects.net). However, it should be stressed that the proposed use of WISDOM was in the context of proposing default fNRB values at national and/or sub-national level, and not to prescribe reference method to be utilized by project developers. The WISDOM approach may be used by project developers, depending on their technical background and on available data, for deriving project specific estimates. User-friendly interface may be developed in the future for the WISDOM approach, incorporating realistic local Sustainable Increment Exploitation Fraction (SIEF), documenting how and on which part of the territory the harvesting is carried out, and thus adjusting the fNRB to the each case specific situation.
Frequency of update of the values for fNRB	Forestry inventory statistics are important inputs in both approaches. In most developing countries, forest inventory and assessment happens at irregular intervals. Countries that conduct regular forest inventory and assessment normally do so with a periodicity of 5 to 10 years. The Forest Resource Assessment of FAO (FRA) is the most comprehensive inventory on the state of forest cover and growth and could be used for this purpose. The frequency for update of the values of the fraction of the non-renewable biomass could therefore be set to coincide with the	The FRA Programme of FAO is an important reference for the systematic analysis of fNRB and, in case the calculation is made using data from FRA, the update of the fNRB default values should be synchronized to FRA reporting. Further it should be noted that FAO does not conduct periodic inventories but only periodic reporting of country-wise statistics based on the harmonization and standardization of heterogeneous country information.

	Public comments:	**Responses:**
	periodicity of FAO forest resource assessment. The fraction of non-renewable biomass could be included as an item for monitoring and reporting under the FAO forest resource assessment. This will ensure the estimates of the fraction of non-renewable biomass assessed in FAO forest resource assessment could serve as the default values.	
WISDOM approach	The WISDOM approach may in some cases be misleading as: - two different levels of data quality and accuracy (primary data for wood supply vs. secondary data for wood demand) are combined; and - data obtained from two different spatial units are combined (geo-data for the sub-national wood supply vs. wood demand data only available as country average)	▪ In the WISDOM method, both supply and demand parameters are spatialized using in general primary data, based on the best available spatial and statistical information. ▪ The integration at different spatial levels is always done using standard GIS procedures and methods. ▪ It should be also noted that the use of average values is unavoidable to some extent (average stock for a given land cover class and ecological zone; average per capita consumption in rural or urban areas, etc.). ▪ The aggregation approach is acceptable when the countries have homogeneous conditions or if there is an adequate approximation for such homogeneity.
WISDOM approach	The WISDOM approach does not seem to take account of the existing guidance in the small-scale methodologies and the definition of EB23 Annex 18, but rather re-interprets 'non-renewable biomass' in own way.	The approach uses different auxiliary parameters in the calculations to estimate the fNRB values, but it is not in contradiction with the EB provisions.
WISDOM approach	The aggregation in the approaches in the SSC 33 Annex 8 is not always accurate. In particular around large urban areas in some countries there are strong distortions if the wrong aggregation level is used. While the actual fraction of non-renewable biomass is almost 100%, as evidenced by the rapid deforestation around the city and the ever-increasing distance from where fuel wood is	Project developers have the option to carry out a more detailed analysis of actual harvesting areas and indicate a different aggregation level based on local data accounting regional circumstances and local specificities. However, for the sake of simplicity higher aggregation level is considered when deriving national default values for fNRB. When applying WISDOM approach by project developers Sustainable

	Public comments:	**Responses:**
	imported in to the city's markets, the WISDOM approach, for example, aggregates the urban areas and the surrounding province leading to incorrectly low fNRB. It would be obvious to an observer at the project site that fNRB is very close to 1. The level of aggregation that can reliably represent fNRB depends on the location. In some areas, particularly the most urbanised areas, biomass used is likely to be from a larger area and there may exist a formal market. In other areas, biomass may be sourced very locally. A local-level of aggregation needs to be an option for the project developer where data is available and if it is appropriate for the project. However, there are many countries where local-level data is not readily available and conducting surveys can be prohibitively expensive for project developers. Therefore, a higher aggregate level of data should also be allowed.	Increment Exploitation Fraction (SIEF) may be adjusted according to the local data.
WISDOM approach	WISDOM model explicitly assumes that the fNRB is location-specific, i.e., there are very large variations within countries and regions, as its fundamental assumptions. This is NOT appropriate in the calculation of fNRB. In most of the countries where fuelwood is used and forest is decreasing, fuelwood has a single (or linked) market, which encompasses the whole country. It means that TOTAL demand and supply relation in the country is important. It is meaningless to consider region-specific fuelwood demand/supply in order to evaluate the carbon stock change in the country. Even if demand < supply in some area in the country, the demand reduction activity in the area implies more fuelwood can be exported to other areas where demand > supply in the country. This contributes to avoid carbon stock decrease in these areas in	There are studies around the world showing that wood energy systems and the impact of wood harvesting may be location-specific and this character is particularly evident in large countries. Also there are contrasting situations between rural areas and around major urban consumption sites. In the case of a specific country with small territory or countries with homogeneous conditions where the initial analysis shows little variability in fNRB values, a national default value may be more recommended. However, the default fNRB at national level are not mandatory for project developers, on the contrary: particular projects may decide to conduct more detailed/spatialized analyses.

	Public comments:	**Responses:**
	the country (as a sort of negative leakage effect). I consider that WISDOM model is good for REDD study or other objectives, but is NOT appropriate to evaluate fNRB. The fuelwood is the most important energy source (especially for cooking) LDCs. It is totally unrealistic to prepare such precise data to be used in WISDOM model in LDCs. If WISDOM model use is mandatory, it means that the related projects cannot be implemented.	
Data and values for DRC	In the Democratic Republic of the Congo (DRC) for example, at the sub-national level of Kinshasa city, the proposed methods lead to highly unrepresentative results for the following reasons: 1) In the second largest forested country of the world (145 M. hectares, or 62% of the country's 2,345,409 km^2), it cannot reasonably be assumed that the forests areas' sustainable increment of a given administrative unit (and its neighbouring units in case of urban areas context) is the first to be exploited (i.e. biomass resources would be rationally exploited – cf. WISDOM analytical Step 1). As a matter of fact, the wood-energy sector in DRC is mostly informal and the relevant forestry laws & regulations are insufficiently applied to enable any sustainable management of the forests at stake, according to the preliminary conclusions of an Analysis of the wood energy value chain for Kinshasa and Kinsagani1, in a country which stands in the lowest 2 percentile of the World when it comes to "Government Effectiveness" and "Rule of Law"2. 2) Kinshasa unrepresentative fraction may be due to a computation over almost all of Bandundu and Bas-Congo neighbour provinces (or even second degree neighbours, although we have not accessed the detailed calculation) whereas average distance to sources of fuel wood and charcoal supplying Kinshasa were respectively found as 135 and 102 km1 i.e. 5 to 10 times less than the overall	The emphasis is on location-specific character of fNRB, i.e. the need to go beyond aggregate values to estimate fNRB which is a viable option for project proponents. The following may be noted: 1 – Deforestation is a complex process caused by many factors, not only woodfuel extraction. 2 – When default values are not accurate, project developers may need to indicate a different aggregation of neighbouring administrative units to account for the area where woodfuels are actually harvested. Also projects may provide evidence on the Sustainable Increment Exploitation Fraction (SIEF), which describes how rationally the harvesting is carried out. These two local factors would allow project developers to review and modify the default value.

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	area of Bandundu (and Bas-Congo) which obviously contain massive forest covers (over one tenth of the country's, in fact) most of which is untouched by Kinshasa demand. This is further highlighted by a recently approved Forest Investment Program3 which identified Kinshasa's fuel wood supply area as restricted to the City-Province of Kinshasa, parts of Bandundu and Bas-Congo Provinces, where "deforestation rates are well above the national average" (which are already "relatively high in Central Africa and must be viewed in relation to the size of the forest area in the DRC, which is one of the 10 countries with the largest absolute forest loss each year"), outlining that "currently the supply of wood energy in Kinshasa is not sustainable and the deforestation belt around Kinshasa continues to grow alarmingly". 3) Another unrepresentative factor is the potential Renewable Biomass fraction (pRBf and mfNRB) which "assumes rational harvesting practices, which may be quite different from those actually implemented in the field. For example, if the natural increment is neglected and the exploitation is entirely unsustainable, the true fNRB is 100% even in a biomass-rich area. On the opposite, if the entire sustainable increment is exploited before touching the forest capital, the true fNRB shows the lowest possible value, which corresponds to the value of mfNRB". Indeed, numerous references are available in expert literature to illustrate the rampant deforestation that has been damaging Congolese urban areas surroundings for decades, with wood fuel collection distances and prices ever increasing4, and other scarcity evidence directly contradicting the highly renewable results of the said WISDOM approach suggested. Such references will include CIFOR Makala project complete findings5 to be released by year	

	Public comments:	**Responses:**
	end, as well as the future conclusions of the REDD National Coordination ongoing efforts to characterize deforestation reference levels in DRC.	

Issues raised regarding the approach based on Mean Annual Increment (MAI):

Issue	**Public comments:**	**Responses:**
Default values vs. project-specific values	Providing agreed standardised approaches and default factors can help simplify the process and reduce transaction costs for projects in the areas. However, the choice whether to use the default value should explicitly remain voluntary; as the default factors are determined at a high aggregate level and are conservative – project developers must still have the opportunity to use more local and accurate data.	The default factor approach will not replace the option to determine parameters on a project level. Standardized values provide an ex-ante option which is conservative and widely applicable to a region. Project developers have the option to use project-specific values that are more accurate based on locally available data and/or monitoring.
Default values vs. project-specific values	We recommend that while such standardized approaches are made available for the sake of simplification and streamlining of woody biomass saving projects under the CDM, alternative approaches based on more accurate knowledge from local expert work are clearly promoted together and that the indicative default values showcased for different countries at national and sub-national level are not to be detrimental to such alternative relevant approaches.	The use of conservative national or regional default values will not be mutually exclusive of the option to use project-specific values where more accurate data is available.
MAI approach	The approach does not seem to take account of the existing guidance in the small scale methodologies and the definition of EB23 Annex 18, but rather re-interprets 'non-renewable biomass' in own way.	The method follows the guidance in the small scale methodologies while providing an opportunity to estimate DRB and NRB based on readily available national or regional data. Thus, the method proposes that the growth in

Issue	Public comments:	Responses:
		biomass be used as Demonstrably Renewable Biomass. This approach should yield more consistent default values at a national level based on publically available data and hence simplify the calculation of NRB.
Alternative approach for fNRB	SSC methodologies AMS-I.E and AMS-II.G both define woody biomass as renewable if one of the following two conditions is satisfied, in line with EB23 Annex 18: The woody biomass is originating from land areas that are forests / non-forest areas (e.g. croplands, grasslands), where: (a) The land area remains a forest / non-forest areas; and (b) Sustainable management practices are undertaken on these land areas to ensure, in particular, that the level of carbon stocks on these land areas does not systematically decrease over time (carbon stocks may temporarily decrease due to harvesting); and (c) Any national or regional forestry, agriculture and nature conservation regulations are complied with. When using these definitions from the existing EB guidelines, default values for fNRB can be developed based on the national statistics collected by Food and Agriculture Organization of the United Nations (FAO) within the Forest Resources Assessment Programme (FRA). For example, based on the FRA statistics, it can be demonstrated that condition (a) is not satisfied for most African countries3, meaning that all woody biomass used leads to deforestation and declining of carbon stock and thus is non renewable. To demonstrate a specific country example of Tanzania, both forest and other wooded land areas there have been declining and non-forest areas ("other land" category) have been increasing which proves that condition (a) in the definition of renewable woody biomass is not satisfied. With a rapidly declining forest area, the condition (a) is not met.	The information and statistics on sustainable management practices in developing countries may be scarce, which is why the MAI approach uses publicly available data.

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	Therefore, Demonstrably Renewable Biomass (DRB) is zero, and thus fNRB is 1. (3) Condition (b) of the SSC methodologies and EB23 Annex 18 Another simplified approach is based on condition (b) and assumes conservatively that all forest plantations are sustainably managed. While a general declining trend in forest area is observed in many countries, certain areas of forest might still have sustainable management practices. In most developing countries the statistics on management practices is not available. However, the main category of forests that is likely to be managed sustainably is plantations. Therefore, for simplification purposes we suggest to consider all biomass coming from plantations as DRB by default. Using the same example of Tanzania, plantations account for 240,000 hectares, while the total forested area is 33.4 million hectares. Therefore, if conservatively it is assumed that all plantations are sustainably managed, then fNRB = 1 – (plantations/total) = 1 – 240,000/33,400,000 = 0.9928. In addition, the declining trend in the carbon stocks is apparent in the statistics, which proves that condition (b) in the definition of renewable biomass is not satisfied either.	
Alternative approach for fNRB	The sustainable development impact of ICS is non-ambiguous independent of the specific fNRB factor in a country. Therefore in order to incentivize ICS projects a global fNRB of let's say 98% could be applied. As soon as e.g. 100,000 CERs have been issued the fNRB is reduced to 92% and so on. A minimum level for fNRB would need to be defined in order to allow projects to be still economically feasible (similar to the marketprice for electricity). A similar concept could be applied on regional level or for vegetation zones to take into account substantial variations of the fNRB.	This seems to propose a new interpretation of fNRB, and is not in line with the CDM requirement that the CERs are real and attributable to the project activity.

Other comments from the call for public inputs:

Issues	Public comments:	Responses:
Approaches for	The two approaches defined in the call for inputs for deriving the regional/country	The two approaches are not mutually

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quantifying the fNRB - Comparison between the WISDOM and MAI	default values for the fraction of non-renewable biomass are based on the concepts of biomass annual or periodic increment and sustainable supply of biomass in a region. Therefore, they are not mutually exclusive methods for estimating the fraction of non-renewable biomass. The primary difference between the two methods is the spatial disaggregation of biomass increment. The WISDOM approach permits estimation of the fractions of non-renewable biomass at sub-national levels taking into account the variations in biomass and population, and wood consumption in a spatial context. However, a major constraint of the WISDOM approach is that the spatially disaggregated data on biomass production, population and wood consumption patterns are not readily available in several developing countries. Considering that DNA is a nodal entity to communicate on applicability of the standardized baselines to the UNFCCC. The DNA communication to UNFCCC on the applicability of the results of WISDOM approach to the specific country contexts may be required to enable the project entities to adopt the default values on the fraction of non-renewable biomass assessed using WISDOM approach. There is also a need to simplify the documentation of the WISDOM approach and make it user friendly and accessible to project participants with limited technical background, for example, better explanation of Sustainable Increment Approximation Fraction (SIAF) and other concepts used in the model may be required along with a comprehensive revision of the documentation of WISDOM approach. Mean Annual Increment (MAI) approach can be understood by project participants with less difficulty relative to the WISDOM approach. As MAI approach estimates the fraction of non-renewable biomass based on the quantification of the difference between the fuel wood consumption and the adjusted mean annual increment of biomass growth, the forest inventory studies available at a sub-national or a country or region levels and relevant forestry expertise could accessed by DNAs and project participants. In adopting MAI approach at sub-national or national or regional levels, regional variations in the MAI of forests could be captured in MAI calculation weighted by the forest type/vegetation in sub-national or national or regional	exclusive. The project proponents may optionally use WISDOM on project specific basis or apply the default values of MAI or project specific values that are derived in accordance with current provisions of the relevant guidance and methodological requirements.

Issues	Public comments:	Responses:
	contexts. Therefore, both WISDOM and MAI approaches could be permitted for assessing the default values for the fraction of non-renewable biomass and that the project participants can choose either of the two approaches for estimating the fraction of non-renewable biomass.	
Practicality and appropriateness of the WISDOM and MAI	Project participants may be allowed to choose either of the two approaches. Where possible, countries should be encouraged to derive sub-national non-renewable biomass fractions using either approach.	Agreed.
Practicality and appropriateness of WISDOM	After studying Attachment A (Approach based on WISDOM) (of SSC WG 33 Annex 8) it is not clear to us how the approach could be applied by project participants who are no experts in the field. Especially the interpretation of georeference data seems to be too complicated for project participants. The model would therefore need to be standardised in a way that only primary country data would need to be filled in a predefined tool by PPs. According to our experience which is limited to certain country examples, WISDOM is using primary data to determine the wood supply using geo-data. The demand model however may depend on secondary sources to determine the wood consumption per person or household.	See response to WISDOM method above
MAI approach	Increment (MAI) represents in principle a valuable approach. The use of FAO Forest Resource Assessment (FRA) country reports provides a data source which is widely available and clearly structured. However, in our experience the given data quality is differing considerably due to availability of primary data. This applies especially for LDCs, where data quality is particularly poor. This may lead to situations where projects in countries with a high CO2-reduction potential are not implemented due to non-availability of adequate data. As a result, in our opinion the degree of accuracy of the data provided in FRA country reports would need to be assessed case by case prior to adopting the MAI approach in order to determine realistic and credible results	MAI approach has been adjusted to account for the uncertainties associated with the adequacy of data. And values are recommended only for countries where meaningful results can be obtained from the available data.

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	for the fNRB for a broad range of countries.	
Appropriateness of the approaches for fNRB	Both approaches mentioned in the SSC 33 Annex 8 are in principle valid approaches for determining highlevel aggregate fNRB at the level of the EB, or possibly individual DNAs, for providing default values that can be used on an ex-ante basis. However, the approaches do not necessarily seem appropriate for the use by single project developer for a small scale project: there are examples where the featured approaches derive a fNRB which is totally different from the local reality of the fraction of non-renewable biomass. The transaction costs associated with these two approaches are likely to be prohibitive for small scale projects which are likely to take place in the poorest areas in the world. Additionally, neither approach seems to take account of the existing guidance in the small scale methodologies and the definition of EB23 Annex 18, but rather re-interprets 'non-renewable biomass' in their own way. Therefore, these approaches are not fully consistent with existing methodologies and definitions as used in the CDM. There is a dearth of data in many regions where these project types are going to be implemented, and the approaches may not be possible in the regions. Therefore, the calculation of fNRB will need to use data that is already available.	The approaches are optional and other project specific options are still available
Appropriateness of WISDOM	We cannot accept the mandatory use of WISDOM model.	The use of WISDOM is not mandatory.
Level of aggregation for fNRB	When applying the MAI approach to calculate the fNRB, standardisation can only be achieved if the same data sources (e.g. FRA country reports) for all project activities will be used. The FRA country reports are only available on a national level. Thus, if the MAI approach will be applied, fNRB can only be calculated on a national level in order to ensure a high level of comparability. However, in countries with heterogenic climatic and geographical conditions, a national default fNRB can only represent an average value and not the actual fNRB within the different climatic zones. This would lead to an over- or underestimation of fNRB in a project activity depending on	The MAI has been adjusted to account for differences in climatic zones

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	the actual project area. To ensure comparability, we recommend to apply the same level of aggregation for both parameters, fNRB and woodfuel consumption. Thus if fNRB is determined on a national level, the woodfuel consumption default values shall also be given on a national level, and vice versa. We recommend to apply vegetation zones to determine the appropriate level of aggregation similar to the approach suggested by the EB for default woodfuel consumption levels in Africa.	
Level of aggregation for NRB	Countries should strive for a sub-national (i.e. administrative boundaries of states or provinces or agro-ecological zones) level of aggregation although countries with low capacity should be allowed to start with national level data.	Project specific values can be applied which will account for sub-national differences
Frequency of update for the fNRB values	fNRB should be a parameter which is determined ex-ante. Updates of the default value are therefore only deemed necessary at renewal of the crediting period per project or programme.	Noted
Frequency of update for fNRB	The fraction of non-renewable biomass is likely to be gradually increasing, due to population growth and other pressures, as is witnessed from the ongoing deforestation throughout particularly the most populous developing country regions. While the volumes of fuelwood consumed may be affected by economic growth, which may lead to some households switching to different technologies and fuels, updates of the default values are unlikely to be required more than once every crediting period.	Noted
Frequency of update for fNRB	Forestry inventory statistics are important inputs in both approaches. In most developing countries, forest inventory and assessment happens at irregular intervals. Countries that conduct regular forest inventory and assessment normally do so with a periodicity of 5 to 10 years. The Forest Resource Assessment of FAO (FRA) is the most comprehensive inventory on the state of forest cover and growth and could be used for this purpose. The frequency for update of the values of the fraction of the non-renewable biomass could therefore be set to coincide with the periodicity of	Noted

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	FAO forest resource assessment. The fraction of non-renewable biomass could be included as an item for monitoring and reporting under the FAO forest resource assessment. This will ensure the estimates of the fraction of non-renewable biomass assessed in FAO forest resource assessment could serve as the default values.	
Alternative approach for fNRB	Thinking completely out of the box and ignoring some core principals of the CDM we would like to bring forward an idea which emphasises the sustainable development aspect of cook stove CDM projects. The use of inefficient cook stoves is one of the biggest environmental challenges for many developing countries especially in Africa. The World Health Organization (WHO) lists indoor air pollution from primitive household cooking fires as the leading environmental cause of death in the world, as it contributes to nearly 2.0 million deaths annually - more deaths than are caused each year by malaria. Therefore there is an urgency to provide solutions for the problem and as the CDM is seen by many as a suitable mechanism to support the widespread dissemination of improved cook stoves (ICS) a concept should be developed which creates incentives for project developers to disseminate ICS as quickly as possible. A possible concept to achieve this target can be adopted from the scheme for feed in tariffs as applied for renewable energies in many countries. Renewable energy projects of a certain technology (let's use PV projects for an example) get a fixed tariff for every kWh which is fed into the grid. The tariff is fixed at time of commissioning and applies for the full lifetime of the project. At the same time installation targets are defined on national level and as soon as the target is achieved the tariff is reduced automatically for all new installations (e.g. all PV installations receive a tariff of 0,2€/kWh until a total of let's say 100 MW is installed in the country. All PV projects installed afterwards receive a tariff of 0,18€/kWh until 200MW PV capacity is installed. The next batch receives 0,16€/kWh until 300 MW are installed and so on). At some point when the technology has become competitive the feed in tariff for PV should be the market	This seems to propose a new interpretation of fNRB, and is not in line with the CDM modalities and procedures.

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	level price. A similar concept could be adapted for the fNRB factor of ICS projects under the CDM. The sustainable development impact of ICS is non-ambiguous independent of the specific fNRB factor in a country. Therefore in order to incentivize ICS projects a global fNRB of let's say 98% could be applied. As soon as e.g. 100,000 CERs have been issued the fNRB is reduced to 92% and so on. A minimum level for fNRB would need to be defined in order to allow projects to be still economically feasible (similar to the market price for electricity). A similar concept could be applied on regional level or for vegetation zones to take into account substantial variations of the fNRB.	
Other approaches for NRB	Until the FAO Forest Resource assessment operationalizes the reporting on the fraction of non-renewable biomass, the data and information available in the published research studies may be permitted so as to facilitate the availability of the data on non-renewable biomass fraction at sub-national level.	Noted
Alternative approach for fNRB	As I explained in the first bullet below, fNRB = 100% for the countries where forest is decreasing totally. The SSC WG can specify such countries as a list by using some statistics, expert judgments, submission by the host country. If CDM allows that the fNRB is location-specific (not only by using WISDOM model but also by using other models), the related activities cannot be implemented for the poor people in the area where the fNRB is zero or small number. This kind of 'bias' will cause the SOCIAL ISSUE. Since CDM is a mechanism for sustainable development, this cannot be accepted by the COP/MOP, I believe. • In general, the poor people living in rural areas can enjoy the benefits of CDM only by reducing fuelwood use. I believe that SSC WG shall prepare arrangements for them and not limit this opportunity for them.	This seems to propose a new interpretation of fNRB, and is not in line with the CDM modalities and procedures.

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Other approaches for determining fNRB	The PDF believe that the most appropriate approach in each country should be proposed by the DNA, based on the data availability. Three further approaches are explained briefly below, based on: (1) published studies; (2) condition (a) of the SSC methodologies and EB23 Annex 18; (3) condition (b) of the SSC methodologies and EB23 Annex 18; and (4) a combination of conditions (a) and (b). (1) Published studies Published studies on the local or regional fuelwood utilisation which provide sufficient information to estimate the fraction of non-renewable biomass may already be available. Such studies have been carried out by national governments, including for example in their REDD readiness assessments, FAO, academic institutions and others. It should be possible for project developer to quote such studies without having to replicate the work and incur unnecessary transaction costs. (2) Condition (a) of the SSC methodologies and EB23 Annex 18 SSC methodologies AMS-1.E and AMS-II.G both define woody biomass as renewable if one of the following two conditions is satisfied, in line with EB23 Annex 18: The woody biomass is originating from land areas that are forests / non-forest areas (e.g. croplands, grasslands), where: (a) The land area remains a forest / non-forest areas; and (b) Sustainable management practices are undertaken on these land areas to ensure, in particular, that the level of carbon stocks on these land areas does not systematically decrease over time (carbon stocks may temporarily decrease due to harvesting); and (c) Any national or regional forestry, agriculture and nature conservation regulations are complied with.	This seems to propose a new interpretation of fNRB

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	When using these definitions from the existing EB guidelines, default values for fNRB can be developed based on the national statistics collected by Food and Agriculture Organization of the United Nations (FAO) within the Forest Resources Assessment Programme (FRA). For example, based on the FRA statistics, it can be demonstrated that condition (a) is not satisfied for most African countries3, meaning that all woody biomass used leads to deforestation and declining of carbon stock and thus is non renewable. To demonstrate a specific country example of Tanzania, both forest and other wooded land areas there have been declining and non-forest areas ("other land" category) have been increasing which proves that condition (a) in the definition of renewable woody biomass is not satisfied. (3) Condition (b) of the SSC methodologies and EB23 Annex 18 Another simplified approach is based on condition (b) and assumes conservatively that all forest plantations are sustainably managed. While a general declining trend in forest area is observed in many countries, certain areas of forest might still have sustainable management practices. In most developing countries the statistics on management practices is not available. However, the main category of forests that is likely to be managed sustainably is plantations. Therefore, for simplification purposes we suggest to consider all biomass coming from plantations as DRB by default. Using the same example of Tanzania, plantations account for 240,000 hectares, while the total forested area is 33.4 million hectares. Therefore, if conservatively it is assumed that all plantations are sustainably managed, then fNRB = 1 – (plantations/total) = 1 – 240,000/33,400,000 = 0.9928. In addition, the declining trend in the carbon stocks is apparent in the statistics, which proves that condition (b) in the definition of renewable biomass is not satisfied either. The advantage of this approach is that it is easy, transparent and does not involve high transaction costs due to data collection, as opposed to the other proposed methods.	

Issues	Public comments:	Responses:
	(4) Condition (a) and (b) of the SSC methodologies and EB23 Annex 18 It is also possible to combine the approaches for greater conservativeness. First, it is shown that the land does not remain forest. Second, the fraction of non-renewable biomass is calculated from the area of plantations in the total, as the maximum share of land that is likely to be sustainably managed. **Other issues:** It would be useful for these standardised baselines for displacing non-renewable biomass also to be available for large(r) scale projects. The logistics required for these project types is significant, and it should be possible to build on the logistical set up established and expand a successful project.	