Comments on CDM project which reduces the use of non-renewable biomass

CLIMATE EXPERTS Ltd
Naoki MATSUO

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Project Type:

The project type we are considering now is *to provide some renewable energy technology* (such as solar-cooker, biogas pit, *etc*. mostly to low income households for cooking), *which replaces the use of biomass from forests whose carbon pool is decreasing (or non-renewable biomass*[1]*)*.

It is unclear whether the definition of "non-renewable biomass" (by A/R WG) is equivalent to the biomass from forests where carbon pool is decreasing. If it is found that the "non-renewable biomass" concept does not mean the latter, the latter definition is applied in this comment.

It is emphasized that we do not limit the logics below to the small-scale CDM projects. Although the project activity targets each household or small community typically, full-scale projects can be possible if a large number of households are targeted (*e.g.*, in China and in India).

Whether this type of project is eligible for CDM?

The COP decided, "… the eligibility of LULUCF project activities under the CDM is limited to afforestation and reforestation" (17/CP.7).

The problem is whether the above mentioned project type is categorized as a LULUCF project. The answer is presumably NO. The reason is that the project type mentioned above should be categorized as "CER-type" and NOT "tCER/lCER-type", as shown below.[2]

Reason 1 [technical aspects]
("emission reduction" type and no need to care about non-permanence)

The use of non-renewable biomass is the net "emissions" activity. Therefore, reducing such activity is recognized as "emission reductions". It means that we do not have to care about the "non-permanence" issue any more for this type. Therefore, this type of project should be categorized as "CER-type project" and not "tCER/lCER-type" (which may be identical to the LULUCF project activity specified in the COP Decision 17/CP.7).

Reason 2 [political aspects]
(difference from "forest preservation" activity and social aspects)

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[1] "Non-renewable biomass" is biomass not categorized as "renewable biomass" defined by the A/R WG in its 6th meeting (Annex 7).

[2] Here we define the CER-type as CDM projects without any concern about non-permanence, while the tCER/lCER-type is defined as those with consideration about non-permanence.

The underlying concern of the COP decision was to exclude the "forest preservation" type projects—which keep the forest as it is without implementing specific 'activities'—from the eligible CDM project types.

The principal aim of the targeted project is to provide energy from renewable sources (by using *e.g.*, solar cooker, biogas pit, *etc.*) to local people and NOT to preserve the forest. Therefore, from the political point of view, the COP concern may not correspond with the targeted project type.

In addition, this kind of project has the aspect of *social welfare* in addition to GHG abatement, by providing a clean, sustainable and autonomous energy supply system to poor households in a rural area. We observe that most non-Annex I countries with poor communities are eager to make this kind of projects eligible for CDM. In case the CDM EB has any concern about this point, it shall ask the COP/MOP to make guidance.

Consistent interpretation with the EB 20 "consideration" on carbon pool change

The CDM EB provided a "consideration": "3.(b) *Where a project activity, which does not seek to obtain tCERs or lCERs from afforestation or reforestation project activities, may directly or indirectly results in a net increase of carbon pools compared to what would occur in the absence of the project activity, this increase should not be taken into account in the calculation of emission reductions*" at its 20th meeting (Annex 8).

First, this is NOT a *decision* but a *consideration* and may be reinterpreted/clarified/modified in accordance with further EB/Panel discussions (considering the public comments) and/or possible COP/MOP guidance on this matter.

This consideration may be originated from the issue of categorizing CER-type CDM projects and tCER/lCER-type CDM projects *exclusively* to each other. Namely, a project shall be categorized as CER-type OR tCER/lCER type. CER-type projects generate only CERs and not tCER/lCER; tCER/lCER-type projects generate only tCER/lCERs and not CERs.

In general, a project may include several kinds of activities (either in or outside of the project boundary) which may have an effect on GHG emissions and/or removal for both CER-type CDM projects and tCER/lCER- type CDM projects:

Table: Counting of the anthropogenic GHG change by activity

		"CER-type" project	"tCER/lCER-type" project
GHG emissions increase		Shall be counted	Shall be counted
GHG emissions decrease		Yes (claim for CER)	No (cannot be claimed for CER)
LULUCF component	CO_2 removal increase	No (cannot be claimed for tCER/lCER)	Yes (claim for tCER/lCER)
	CO_2 removal decrease	Shall be counted	Shall be counted

[note] "Shall be counted" does not include the case where such effects are negligible.

In theory, it may be possible that a project would generate CER and tCER/lCER simultaneously. However, maybe because of the differences associated with the crediting period, methodology approval process, *etc.* between the CER-type and the tCER/lCER-type, it is extremely difficult

to generate both CERs and tCER/lCERs from one project simultaneously under the current procedures (separate procedures[3] may be needed).

For example, the "biomass energy use" type CDM is the "CER-type". However, such project activity may have some component of "LULUCF" at the supply side of the biomass (even if it may be outside of the boundary).

The EB 20 'consideration' may be understood as a procedural solution to keep the CER-type and the tCER/lCER-type in an exclusive manner. Assuming the targeted type of project to be eligible under CDM (supported by the logics above), the EB 20 'consideration' should be clarified as "Where a project activity, which does not seek to obtain tCERs or lCERs from afforestation or reforestation project activities, may directly or indirectly result in a net increase of carbon pools compared to what would occur in the absence of the project activity, *this increase should not be claimed for tCERs or lCERs. If it comes from the activity to reduce biomass from forests whose carbon pool is decreasing, such net increase of carbon pools by the project activity can be counted to claim for CERs*." (*italic* is a modified/added part).

How to count "emission reductions"?

Once such a project type is recognized as an eligible CDM type, a methodology is needed to count the amount of emissions reductions from the project activity (common for small-scale and full-scale CDM methodologies).

Four key points are to be considered:

The first key point is <u>whether the "non-renewable biomass" is meaningful</u>.

> Avoiding tree-cutting practices results in sequestering the carbon in forests (compared to what would occur otherwise), the biomass stock of forest is either increasing or decreasing as a whole (*i.e.*, no fundamental difference). In other words, if the biomass is non-renewable, the practice would delay forest decreasing (= emission reductions), while if it is renewable, the practice would enhance forest growth. In both cases, the carbon (to be released by tree-cutting) would be sequestered as biomass. In this regard, there is physically no difference in the sense of climate mitigation for both cases in a short timeframe.
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> However, in a longer timeframe, if the biomass stock of forest is stable or increasing, the avoidance of tree-cutting practice results in the increase of carbon stock. We face the concern of "non-permanence" for this case. On the other hand, if the biomass stock of forest is decreasing, the avoidance of tree-cutting practice results in emission reductions and no need to care about non-permanence.
>
> Therefore, we need to differentiate renewable and non-renewable biomass in the context of CDM, where the non-permanence issue must be taken into account.

The second key point is <u>whether we need to take the renewable 'component' into consideration</u> in accounting for the volume of harvested wood collected by the project (such as renewable

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[3] It is somewhat complicated if CER-part is registered and tCER/lCER-part is not. In addition, baseline scenario identification shall cover possible activities in the whole project, therefore, shall be common in the PDDs for CER-part and tCER/lCER part.

part: 60% and non-renewable part: 40%).

For dead wooden biomass that have been picked-up, "*the biomass residue and the use of that biomass residue does not involve the decrease of carbon pools, in particular, dead wood, litter or soil organic carbon on the land areas where the biomass residues are originating from*" is recognized as the renewable biomass as defined by the A/R WG.

For the woody that has been cut off biomass, the definition of "renewable/non-renewable biomass" by the A/W WG (Annex 7 of 7th meeting report) clearly defined that such categorization comes from the "characteristics of the area of the biomass source"; namely,

"*The biomass originating from land areas that are forests where:*

(a) The land area remains a forest; and

(b) Measures are undertaken on these land areas to ensure that the extracted biomass can regrow, by maintaining or improving the species composition, stand density and soil fertility; and

(c) Any national or regional forestry and nature conservation regulations are complied with."

is recognized as the renewable biomass.

Therefore, it is *inappropriate* to distinguish/separate the biomass into the components of "non-renewable" and "renewable", if it is cut off in the same area.

The third key point is <u>how to apply the definition</u> by A/R WG on renewable/non-renewable biomass to identify whether the biomass in concern is non-renewable one, which may generate "emission reductions". <u>Is additional definition needed?</u>

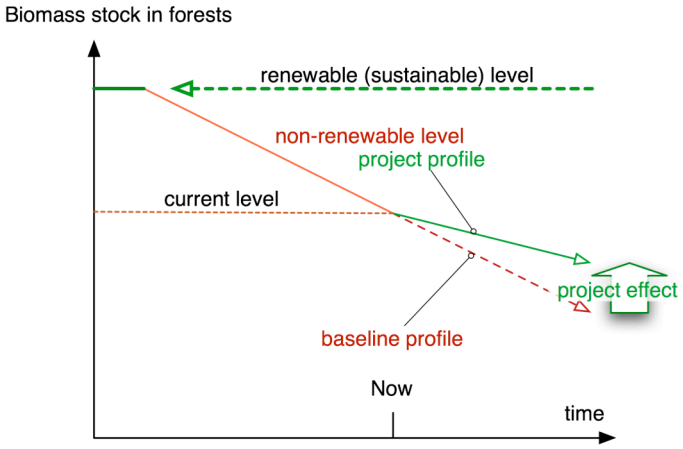
First, It is unclear whether the definition of "non-renewable biomass" (by A/R WG) is equivalent to biomass from forests where carbon pool is decreasing. It is preferable to include such physical trends on carbon pool in the definition of "renewable/non-renewable biomass", in order to use such a definition for the differentiation of the CER-type and the tCER/lCER-type.

From the perspective of "emission reductions", another perspective in definition is needed for the definition of non-renewable biomass:

Def. 1: At a time-slice (*e.g.*, for 5-years), the stock of the biomass of the forest is decreasing (marginal definition), *or*

Def. 2: Historically, the stock of the biomass of the forest is below the pre-decreasing level (historical definition, see the figure below).

as shown in the following figure.



It is preferable to select the definition and give the flexibility to its confirmation procedures, considering the data availability of the rural areas in non-Annex I countries, where the targeted project type would be implemented.

The fourth key point is an accounting method for emission reductions generated from the avoidance of tree cutting.

In theory, the biomass stock change by the project activity is recognized as "emission reductions" if the biomass is from forests where carbon pool is decreasing.

On the other hand, it is easier to monitor the mass of cut-trees (harvested wood) and picked-up trees. The former is recognized as non-renewable biomass and the latter is recognized as renewable biomass.

In general, the amount of biomass stock difference between the baseline and project scenarios is larger than that of cut-trees.[4] Therefore, the method to calculate the emission reductions as the "difference in the amount of cut-trees (harvested wood)" provides a conservative estimation.

[4] The IPCC GHG Inventory Guidelines (1996) defines the ratio as "... an expansion ratio can be applied to account for the non-commercial biomass (limbs, small trees *etc*.) harvested with the commercial roundwood and left to decay. The following default ratios can be used:
- Undisturbed forests: 1.75,
- Logged forests: 1.90,
- Unproductive forests: 2.00" (Vol. 2 Workbook, Page 5.6).