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Comments on the "tool for the demonstration and assessment of additionality" and the "draft baseline scenario selection tool", including suggestions on a merging of baseline selection and additionality determination

Dear Mr. Miguez,
Dear Mr. Stehr,
Honorable Members of the CDM Executive Board,

The World Bank Carbon Finance Unit would like to express our appreciation for the opportunity to submit our views on the important work that the CDM Executive Board is undertaking on the determination of additionality and the selection of baseline scenarios. We would be happy to provide further clarifications, respond to questions and/or provide additional input if it is deemed useful to Members of the Board.

The CDM Executive Board has invited comments, and the Secretariat has issued two calls for submission of input, on the selection of baseline scenarios and the determination of additionality, which both close on March 26, 2006. This note responds to both calls. The note groups the relevant issues as follows:

A. General considerations regarding baseline selection and additionality determination.
B. Comments on the draft "baseline scenario selection tool", including alternatives to the draft tool.
C. New proposals to demonstrate additionality, including possible alternatives for additionality tools in light of the existing tools and proposals to improve the current version of the additionality tool.
D. Options to combine the selection of the baseline scenario and the demonstration of additionality, including possibilities of merging the additionality tool with the baseline scenario selection tool.

A. General Considerations on Baseline Selection and Additionality

It is our understanding that the selection of a baseline scenario and the determination of the additionality of a project (i.e. the project is different from the baseline scenario) are logically mirror images of the same endeavor. It should therefore be possible to apply the same set of criteria in order to identify what is the baseline scenario and which scenario or scenarios are additional. We also understand that the condition that a CDM project activity must have lower emissions than those of the baseline scenario requires a separate test that compares baseline emissions and project emissions. The latter is not subject of this note.

We define the baseline scenario as the scenario that would most likely occur in the absence of the CDM (or any relative incentives to lower greenhouse gas emissions). We define the project scenario as any scenario that project participants may undertake or promote and which has lower emissions than the baseline scenario.

We further consider that most activities are undertaken for financial or economic gain and are impacted by concerns for costs or by other obstacle that may eliminate or reduce the likelihood that the activity will be undertaken. It is thus possible in principle to study future scenarios under the assumption of rational behavior of those acting.

There are, in principle, only three project-based approaches that allow an assessment of whether a certain scenario is likely to occur or would be additional.[1]

*Observation*s of what people are, or have been, doing (thus disclosing their decisions): This criterion relies on observable individual decisions (or a control group). Following this approach it is possible to say that a scenario that is observed in *x* per cent of similar cases is also the likely scenario in the case under investigation (baseline scenario) or that another scenario that is observed in (*1-x*) per sent of similar cases would be unlikely or less likely to occur in this situation. A typical implementation of this approach is through the definition of a market penetration threshold for a new technology: for instance, a technology that is observed in e.g. 80 per cent of cases represents the most likely baseline scenario and any technology that is observed in less than e.g. 20 per cent of cases represents a project scenario that is additional (if it reduces emissions).

Simulation of decisions that people are making: This approach relies on assumptions about how economic and financial decisions are made. The criterion typically calls for some economic or financial analysis of alternatives and picks the one with the highest economic or financial attractiveness (not considering CDM income) as the most likely and therefore the baseline scenario. This implies that all other scenarios not picked as the baseline are additional (if they reduce emissions). Alternatively, scenarios that remain below a specified level of attractiveness (e.g. in terms of the internal rate of return of an investment) can be identified as additional.

Analysis of the techno/socio/economic context of decisions: This approach compares different scenarios using qualitative hurdles that hinder or prevent specified scenarios

[1] A fourth approach would be to reach political agreement on predefined baseline scenarios, as used for small scale projects, or to agree on certain defining features that directly determine the baseline scenario and the additionality of projects, such as when using certain technologies.

from occurring. The approach can be implemented as a simple barrier analysis (i.e. a specified scenario cannot overcome a barrier) or as a comparative analysis of how the relevant scenarios relate to hurdles that make their implementation difficult or risky and therefore how likely a given scenario would occur. The scenario with the least (or lowest) obstacles would be the most likely and thus the baseline scenario. All scenarios with greater obstacles would be additional.

These approaches are included in some form in the existing baseline and additionality tools. All three approaches have advantages and disadvantages. Not each approach works equally well for each situation, and sometimes they may not be able to unambiguously identify a baseline scenario or determine the additionality of a project. It is therefore helpful to allow project developers to choose between them and to also allow a combination of these approaches.

B. The Draft Baseline Scenario Selection Tool and Possible Alternatives

We are of the opinion that the proposed baseline scenario selection tool is a significant step forward and in the right direction, provided that it does not place unnecessary burden on project developers through repetitive analysis and presentation. Moreover, if baseline scenario selection is implemented as a separate tool, it needs to be assured that the inevitable redundancy of the steps in the baseline tool does not undercut the steps in the additionality tool. Thus, we have a number of concerns that we think should be taken into account in a revised version of the tool.

General comments

Baseline approaches according to Art. 48 M&P: The baseline selection tool does not refer to the baseline approaches in Art. 48a-c of the Modalities and Procedures, although those approaches do offer valuable information as to what the Parties considered appropriate baselines. Although those approaches refer to baseline emissions, it is clear that baseline emissions are linked to baseline scenarios and that therefore these approaches are relevant for the tool. It should therefore be clarified what the relation between the optional baseline selection tool and the possibility to chose between the three baseline approaches in Art. 48 would be.

The rationale followed by the baseline tool is to identify the most attractive investment alternative from among those alternative scenarios that are not prevented by a barrier. The tool therefore appears to describe only a way to proceed under approach 48b, but not under approaches 48a or 48c, which already define the baseline. The tool also seems to lack consideration of cases where an approved methodology allows for only one predefined baseline scenario (e.g. venting of landfill gas). It seems that for these cases an additionality test would be sufficient.

It should therefore be decided how the tool would cover the approaches under 48a and 48c as well as the case of a predefined baseline or whether those cases would be outside of the scope of the baseline tool.

We would suggest including those cases in the tool. This can be done by explicitly stating that the list of alternatives to be determined in Step 1 may include only one alternative to

the proposed project not undertaken as a CDM project, if this alternative consists in the actual or historical situation (48a) or the projects undertaken in the previous five years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category (48c) or in a scenario that is predefined by an approved methodology or other appropriate guidance as the relevant baseline scenario in this situation.

Scope of the baseline selection tool in relation to additionality: It currently seems to be the intention to require use of the baseline selection tool as a separate procedure next to the additionality tool (Para 4, p. 1, of EB19, Annex 9).
If the additionality tool is to be applied on top of the baseline selection tool, it appears unnecessary to include the proposed project activity not being registered as a CDM project activity in the list of alternative scenarios generated in Step 1 of the baseline tool, as is currently required. Including the project in this list make only sense, if the use of the baseline tool is an acceptable way to determine the additionality of the proposed project, which is possible, because the project is additional per definition if the baseline scenario as determined by the baseline tool is different from the project activity not being registered as a CDM project activity (provided that the project scenario's emissions are lower than the emissions in the baseline scenario).
We would thus suggest keeping the proposed project activity included in the list generated in Step 1 and renaming the tool to "Optional tool for selection of the baseline scenario and demonstration of additionality" (deleting Para 4 on p. 1 and rephrasing Para 5). This may require introducing a Step 4: "Assessment of emission reductions", which could simply consist in a reference to the estimated emission reductions due to the project activity as reported in the PDD.

Market observations as relevant baseline selection approach: The draft baseline scenario selection tool does not consider market observations in selecting the baseline scenario, although such observations do disclose the decisions that market participants routinely make and they are also at the heart of the baseline approaches in 48a (actual or history situation) or 48c (projects undertaken in the previous five years) of the M&P. As such market observations can provide valuable information about the baseline scenario.
We would therefore suggest including market observations as a relevant criterion for baseline scenario selection, for instance in the form of a prevailing practice test, whereby scenarios, investment decisions or technologies that are rarely observed in the relevant market (e.g. they have a low market share) can be eliminated as selectable baseline scenario or a scenario that is prevalent in the relevant market (e.g. it has a high share) can directly be selected as the baseline scenario.
Information that could be considered in selecting the baseline scenario may include:

- The historic or existing practice of the project entity.
- Whether the historic or existing practice is widely used in the sector or region using the data from official sources. (This would link the project's baseline scenario to the sector baseline taking into account regulatory and market criteria.)
- The baseline scenarios adopted in the approved methodologies for the project type. (A regularly updated list of possible baseline scenarios by project type that are adopted by approved methodologies could be made available on the CDM website.)

Design of the step-wise approach: The draft baseline scenario selection tool follows a strict sequence of approaches through which alternative scenarios are eliminated, starting with barriers and proceeding to an investment analysis. While the proposed sequence of barrier and investment analysis may be appropriate for many projects, the progressive elimination of scenarios does not require following a strict sequence. It may for instance in some cases be possible and/or easier to go directly to an investment analysis. Moreover, it may be sufficient to use only one of the approaches to arrive at a single baseline scenario.
We would therefore suggest giving project proponents the flexibility first, to choose between the three approaches outlined above (i.e. barrier or scenario analysis, investment analysis and market observations) and second, to follow whichever sequence appears more appropriate for the situation at hand in order to reduce the relevant scenarios to one or the minimum number possible. If at this stage several scenarios remain as possible baselines, the tool could require selecting from the remaining scenarios the one with the lowest emissions as the relevant baseline scenario.

Other technical comments

Sub-Step 1a: The list to be generated in this step should first include a comprehensive list of possible scenarios and than apply a first screen that reduces this list to a list of realistic scenarios. The screen would use common sense arguments and observations to eliminate scenarios that most observers would consider highly unlikely (subject to confirmation by the DOE) and which therefore need not be further tested. The first list of possible scenarios should allow the DOE to assess how project proponents define "realistic" scenarios and whether any scenarios have been omitted from the list of realistic scenarios without mention.

Sub-step 1b: This step should clearly state that it applies only to compliance with laws and regulations that are systematically enforced. Footnote 3 refers to the EB 16 decision on national and/or sectoral policies. This decision was modified by EB 22, which deleted the reference to L^-/L^+ policies. This affects also footnote 4 and the text between both footnotes. It should also be clarified that the reference in footnote 3 logically extends to the determination of additionality, i.e. equally applies to all scenarios that are not the baseline scenario.

Sub-Step 2a: This step requires establishing a complete list of barriers that would prevent alternative scenarios to occur. It is not clear why this list would have to be complete in a situation where a limited number of barriers would be sufficient to eliminate all but one alternative. The completeness requirement should therefore be dropped.
The section limits the argument to barriers that prevent alternative scenarios. The concept of prohibitive barriers seems excessive and not applicable to many situations where only a combination of adverse factors adds up to form a preventive barrier. The section should therefore clarify that also hurdles that alone do not constitute a barrier can in combination justify eliminating an alternative.
The second bullet point in the first section under paragraph 2, which deals with investment barriers, refers to the possible availability of ODA as an alternative to unavailable investment, implying that this would eliminate the investment barrier. This assumption is problematic, because it can almost never be shown that sufficient ODA can

not be allocate to finance a particular investment. There is always a possibility of ODA funding, but the actual allocation of ODA and its timing follows (political) rules that cannot be reproduced and predicted by project proponents. Moreover, by definition, ODA funding would have to ensure that existing barriers are overcome. In consequence, strict application of this limitation would turn development projects into possible baseline scenarios and make them non-additional, which would close the CDM to practically all development projects, although ODA funding is, in the end, available for only a very limited number of such projects. On the contrary, the need for, or the availability of, ODA is typically an indicator for the existence of an investment barrier, and ODA typically fills a financing gap in good development projects or subsidizes development projects with insufficient financial performance. Therefore, the reference to ODA should be removed from the bullet point dealing with investment barriers and shifted to the list of types of evidence as a new point (g).

Sub-step 3a/b: The language in this step refers to a situation where no alternative generates any income or benefits other than the CDM related income. This is unrealistic, because the alternative scenarios are typically undertaken to generate a return, and the language therefore requires clarifications: The section should refer to a situation where all remaining alternatives generate the same financial return or benefit (not considering the CDM related income). This is typically the case in projects that only include process changes without changing the quantity, quality or composition of output. In this situation, the baseline scenario can be determined as the alternative with the lowest costs (including costs for the project activity not undertaken as a CDM project activity).
Moreover, the applicability of the simple cost analysis can and should be expanded by considering the net costs and benefits of the CDM activity. For instance, if the electricity sales from a landfill gas operation do not offset the costs of collecting the landfill gas and generating the electricity, the net income from the electricity sales would be zero or negative and this income would thus not need to be considered in the comparison of all alternatives. A comparison of alternatives on a cost basis (including the net cost of the CDM activity) would thus be sufficient. This case should be added.

Sub-step 3c: This step requires the inclusion of subsidies, fiscal incentives, and ODA as revenues. The inclusion of these types of income may be in contradiction to the decision on national policies and regulations, if these subsidies are based on policies that reduce greenhouse gas emissions and which were implemented after 2001. Subject to further EB guidance, it should be clarified that these subsidies need not to be taken into account.
As explained above, ODA should in general not be considered, because it is subsidiary, i.e. it is only provided if there remains a financial gap for the project after taking into account all sources of revenues including CDM related revenues. The reference to ODA should therefore be deleted.
In footnote 5, a preference is expressed for equity based financial indicators. However, the most appropriate type of financial indicator will depends on the individual case. In particular, it should be considered that the equity IRR depends on the ability of a given company to raise debt and thus leverage its equity, which can make the comparison of the alternative scenarios dependent on unrelated financial factors. Footnote 5 should therefore be deleted.

Sub-step 3d: This step requires subjecting the results of the investment comparison analysis to a sensitivity analysis, which should identify assumptions that are critical for the ranking of the alternatives. Whereas it is important for the DOE to assess whether such assumptions are realistic, credible and conservative in the light of the market expectations of the project developer, while considering experience and common practice in the market, drawing automatic conclusions from a sensitivity analysis appears to be simplistic and contrary to best practice. Moreover, the sensitivity analysis is not required for the simple cost analysis, although costs may also depend on expectations. Subjecting the investment comparison to a sensitivity analysis may discriminate against more complex projects that include changes on the output and revenue side.
We therefore suggest eliminating the automatism of this step and including it for information only in cases where the financial indicators of the alternatives are in a close range. If the sensitivity analysis is inconclusive, further justification of the critical assumptions should be required, subject to review and confirmation by the DOE. Alternatively, from the top-ranked scenarios with an uncertain ranking, the scenario with the lowest emissions could be selected as the baseline scenario.

Alternatives to the baseline scenario selection tool

Possible alternatives to the baseline scenario selection tool would have to rely on approaches that are fundamentally different than those described above. It is not clear that those approaches exist. Alternatives would thus have to rely on political agreements and top-down decisions regarding baseline scenarios or emissions, including procedures for the calculation of baseline emissions such as the procedure indicated in Art. 48c M&P.

However, a generalization of baseline scenarios may be possible based on bottom-up experience with certain project types in certain countries or regions. It is likely that homogeneous baseline scenarios will emerge for comparable projects in one country or in comparable countries. In these cases, the CDM Executive Board could provide a shortcut to baseline scenario selection by agreeing on a multi-project or project-type baseline scenario, which would be pre-determined for a project type in a particular country or region and for a particular time period. Alternatively, multi-project baselines could also be developed through data collection and research efforts and subsequently be agreed upon by the CDM Executive Board. Such efforts could be supported by international organizations, host countries, or the CDM Executive Board itself.

C. The Additionality Tool and Possible Alternatives

The issue of additionality has been a cause for concern for many project developers ever since the CDM Executive Board interpreted the Kyoto and Marrakech requirement – which say that the reductions of emission must be additional to any that would occur otherwise – in terms of the additionality of the CDM project activity and thus separated the determination of additionality from the selection of the baseline scenario. Since the discussion about additionality and tools to determine additionality continues, we are please to submit further comment in addition to our comments submitted at previous

occasions (notably our submission of 20 September 2004). Some comments made above also apply *mutatis mutandis* to the additionality tool.

Suggestions for improving the current version of the additionality tool

Demonstrating additionality is not easy to implement in practice. The tool for the demonstration and assessment of additionality ("additionality tool") was developed to provide much needed guidance to project developers on how to demonstrate additionality. It was based on – and largely reflects – the various inputs that were submitted to the Executive Board.
While the additionality tool has made it easier for project developers to draft PDDs and new methodologies, the tool is still rather cumbersome with some arbitrary requirements. The EB and COP/MOP have recognized this through their decisions to keep the tool under review and develop improvements. Based on our experience in applying the tool, we recommend that the following additional amendments are made to the tool to further enhance its effectiveness and ease of implementation:

a) Considering the decision on the early start project, Step 0 is no longer relevant and should therefore be dropped.
b) Step 2 (Investment analysis), first line: deleting "the" in "is *the* economically or financially less attractive than other alternatives" would enhance clarity.
c) Step 2b (Benchmark analysis): please refer to the comment above on equity versus project IRR (under Sub-step 3c of the baseline tool).
d) Step 2d (Sensitivity analysis): please refer to the comment above on sensitivity analysis (under Sub-step 3b of the baseline tool).
e) Step 4 (Common practice analysis): In line with the discussion above, the common practice test should not be an add-on test in addition to the barrier test or investment analysis, but should be a third and separate option that project developers can choose in order to demonstrate additionality. For instance, if a technology is new in a country or has a low market share, there should be no need to also complete a barrier test or investment analysis.
f) Step 5 (Impact of CDM registration): This step can be dropped as it is essentially a repetition of the arguments put forward in Step 2 or Step 3, but presented in a different way. It typically does not provide any additional information.
g) Step 3 (Barrier analysis) and/or 4 (Common practice analysis): The tool should provide the possibility to use "macro-criteria" as part of the barrier analysis or the common practice analysis, such as country risk indicators, which are critical indicators for investments in many developing countries. If for instance a country is not receiving any or only minimal foreign direct investment, any CDM project that involves significant foreign direct investment in this country can be considered additional.

Alternatives to the current additionality tool

Similar to the discussion above under "Alternatives to the baseline selection tool", any alternatives to the additionality tool would have to follow fundamentally different approaches and top-down (political) agreements with the exception of some generalization of the determination of additionality.

The CDM Executive Board could allow a "case-law" approach to additionality, which would involve considering as precedence the validation by a DOE of the additionality of a clearly defined project type in a particular country and the registration of this project activity as a CDM project. The burden of demonstrating and validating additionality for this project type, in this country, and for a specified time period (e.g. the first commitment period) would then be reduced to a confirmation that the project activity is comparable with the one that has already been validated.

Alternatively, the CDM Executive Board could develop the concept of "project-type" additionality. Building on the experience and information collected due to the number of successfully validated and registered projects, the Board could agree that certain types of projects, e.g. projects involving specified technologies, that are undertaken in a specified country or region, would automatically be considered additional for a specified period of time, e.g. for the commitment period. This approach should not be confused with the "positive list" for CDM projects, upon which Parties failed to agree (but which would also be an option), since "project-type" additionality would build on real data and additionality testing and would only involve the assumption that the additionality assessment would not change for projects with certain features in a given region and for a certain time.
This approach could lead to accepting the additionality of certain technologies, such as renewable energy technologies featuring high investment costs, or energy efficiency measures featuring substantial market barriers, or costly end-of-pipe technologies that do not generate any income (other then the CDM related income) e.g. flaring of landfill gas. Ideally, project-type additionality would be used in combination with pre-agreed default baseline scenarios, such as open land filling for all waste management projects in most African countries.[2]

D. Combining Baseline Scenario Selection and Additionality Determination

As explained above, baseline scenario selection and additionality determination are two sides of the same medal: once a baseline scenario has been selected that is different from the proposed project activity, the additionality of the project activity has been confirmed implicitly (provided the project activity has lower emissions than the baseline scenario). This is also demonstrated by the fact that the same approaches and criteria are employed by the baseline and additionality tools and by the parallelism of the two tools themselves. There is therefore no need to combine the selection of the baseline scenario and the determination of additionality: they are intrinsically linked. If this logic is accepted, the additionality tool becomes redundant.

[2] The development of a list of such potential technologies declared additional *per se* would merit further input and elaboration. The World Bank Carbon Finance Unit would be happy to assist in providing further thoughts on the development – and justification – of such a list. A periodic review of such a list would be critical.

If a separate determination of additionality is still desirable despite the repetitiveness of the analysis, it is in principle possible to develop a single tool for baseline scenario selection and determination of additionality. This single tool should:

1.) Make reference to the baseline approaches in Art. 48a-c M&P and include ways to determine the baseline scenario in cases where project developers wish to use either Art. 48a or 48c. As mentioned earlier, a confirmation of the additionality of the project activity would be sufficient to select the sole alternative as the relevant baseline scenario by default. (We understand the Art. 48b is already covered by the draft tool.)
2.) Allow project developers to use any of the three approaches (barriers analysis, investment analysis, common practice analysis) independently or in combination and in the most suitable sequence, in order to eliminate project scenarios and/or confirm the additionality of the project activity. How project developers which to proceed, could be explained and justified as a new Step 0.
3.) Instruct project developers to draw up a list of realistic scenarios as a subset of all possible scenarios. This would be done in Step 1 of the tool.
4.) Use the defined approaches and criteria to eliminate scenarios and select as the most likely baseline scenario the single remaining scenario. If necessary, conservatively choosing from among identically likely scenarios the one with the lowest emissions.
5.) Confirm that the project activity is not the baseline scenario and that it is therefore additional. Or, confirm that the project scenario is additional, because it faces some barrier or hurdles, is not the most attractive option, or is rarely observed in the market. Confirm that the project scenario has lower predicted emissions than the baseline scenario.

The single baseline and additionality tool would instruct project participants to choose – on the basis of guidance contained in the single baseline and additionality tool, in approved methodologies or on the basis of other relevant guidance – how they plan to apply the approaches and criteria for baseline selection and additionality determine. The table below contains examples for possible specifications of approaches and criteria common to both baseline scenario selection and additionality determination.

Table: Common approaches and criteria for baseline scenario selection and additionality determination

	Baseline selection	**Additionality determination**
Barrier / scenario analysis	Eliminate scenarios as likely baselines that are unlikely or less likely to occur than alternative scenarios, because they are prevented by a single barrier or a impeded by a combination of hurdles.	Accept the project activity as additional if it is prevented by a barrier or a combination of hurdles.

Investment analysis	Choose as the baseline scenario the scenario with the least cost or the scenario that is the financially or economically most attractive one, based on a comparison of scenarios using some defined indicator such as IRR.	Accept the project activity as additional if it has higher costs or is less attractive than any of the alternative scenarios or is less attractive than some plausible threshold value such as the return on government bonds.
Common practice analysis	Eliminate as likely baselines scenarios those that are rarely observed in the market, e.g. occur less frequently than a defined threshold, for instance technologies with a market share of less then, e.g., 20 percent. Accept as the most likely baseline scenario a scenario that is frequently observed in the market, e.g. a technology with a market share of more than, e.g., 80 percent.	Accept the project activity as additional if it is rarely observed in the market, e.g. less frequently than a defined threshold, for instance a technology with a market share of less then, e.g., 20 percent. Eliminate as non-additional a project activity that is observed frequently in the market, e.g. a technology with a market share of more than, e.g., 80 percent.