Annex 15

CONCEPT NOTE ON

THREE ISSUES IN THE DEMONSTRATION OF ADDITIONALITY

I. Background

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), at its seventh session in Durban, South Africa, requested the Executive Board of the clean development mechanism (the Board) to "continue ensuring environmental integrity when developing and revising baseline and monitoring methodologies and methodological tools, in particular by considering possible ways of improving the current approach to the assessment of additionality, in order to provide clarity to encourage project activities in the private sector and the public sector".

2. In response to this request by the CMP, the Board included the project "Improvements in the demonstration of additionality" (project 164) in its 2012 management plan (MAP). The MAP further specifies that the secretariat should prepare a "concept note on possible improvements in the demonstration of additionality".

3. The Board considered the concept note at its sixty-eighth meeting and requested the secretariat to prepare a work programme for improving the demonstration of additionality, taking into account the guidance provided by the Board. The Board agreed to prioritize three issues for consideration at its sixty-ninth meeting and requested the secretariat to prepare an information note on the implications of the three issues to facilitate the discussions. The three issues are:

(a) The consideration of certified emission reduction (CER) revenues in the demonstration of additionality;

(b) The forecast of fuel prices for the demonstration of additionality;

(c) The inclusion of projects pending registration or under validation to determine the baseline technology.

II. Consideration of CER revenues in the demonstration of additionality

A. Scope and background

4. The clean development mechanism (CDM) modalities and procedures define a CDM project activity as additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity. To operationalize this definition of additionality, several types of tests have been included in the CDM methodologies and tools for the demonstration of additionality. The most widely used test is the investment analysis test as implemented in the "Tool for the demonstration and assessment of additionality" (the "additionality tool") and the "Combined tool to identify the baseline scenario and demonstrate additionality" (the "combined tool").

5. The CMP definition of the additionality of a CDM project activity is neither linked to its CER revenues, nor to the investment analysis of the CDM project activity. To evaluate whether the CER revenues should be considered in the demonstration of additionality, the scope of this note is limited to the cases for

which additionality is established through an investment comparison analysis or an investment benchmark analysis as implemented in the additionality tool or in the combined tool.

6. The consideration of CER revenues is sometimes referred to as "Step 5" of the additionality tool, which was removed from the additionality tool at the twenty-ninth meeting of the Board, to be consistent with the approved combined tool. However, the original "Step 5" is called "Impact of CDM registration" and lists CER revenues among four other example CDM benefits and incentives. "Step 5" may be satisfied through a qualitative analysis or a quantitative analysis and public inputs consider it a redundant step. "Step 5" is not included in any version of the combined tool and the later versions of the additionality tool, although the qualitative aspect is kept for the barrier test in the additionality tool and in the combined tool.

B. Cases of possible concern

7. The underlying assumption of the investment analysis test is that the most financially attractive alternative is implemented. In the case of investment comparison analysis, the investment of one alternative is not undertaken if the financial indicator of that alternative is less attractive than that of another alternative. In the case of investment benchmark analysis, the investment of one alternative is not undertaken if the financial indicator of that alternative is less attractive than the financial benchmark.

8. When a project participant requests the registration of a project activity, it can be concluded that the project activity without the incentives from the CDM is financially less attractive than the project activity with the CDM incentives. If the project participant can demonstrate that the project is additional according to the investment comparison analysis or the investment benchmark analysis, it may be concluded that the project activity without the CDM incentives is financially less attractive than the baseline alternative, which would be no investment by the project participant in the case of investment benchmark analysis.

9. Therefore, the projects that have requested registration and are demonstrated to be additional according to the investment analysis can be divided into two groups in terms of how the financial attractiveness of three alternatives (i.e. the project without the CDM incentives, the baseline, and the project with the CDM incentives) are ranked from the lowest to the highest:

(a) In Group 1, each project without the CDM incentives is less attractive than the baseline, and the baseline is less attractive than the project with the CDM incentives;

(b) In Group 2, each project without the CDM incentives is less attractive than the project with the CDM incentives, and the project with the CDM incentives is less attractive than the baseline.

10. For the projects in Group 1, the project with the CDM incentives is financially the most attractive alternative and it is implemented. For the projects in Group 2, the baseline is financially the most attractive alternative;[1] however, instead of the baseline, the project with the CDM incentives is implemented. This contradicts the assumption of the investment analysis that the most financially attractive alternative is implemented, and consequently the projects in Group 2 are identified as cases of possible concern.

[1] It is noted that the current requirements do not sufficiently ensure that the lists of alternative are exhaustive and that the identified baseline is the most attractive scenario. In some cases, any alternative more attractive than the project with the CDM incentives can be considered as the baseline. Further guidance is needed on how to ensure that the baseline is really the most attractive scenario.

11. Furthermore, there are inevitable uncertainties associated with the demonstration of additionality through investment analysis, due to the selection of the input values and the financial benchmarks from a range of probable values, as described in the concept note presented at the sixty-eighth meeting of the Board. These uncertainties are more relevant to certain types of project activities and they are categorized as Group 3. For Group 3, it has been suggested that the impact of CER revenues can be evaluated as an additional safeguard in the demonstration of additionality.

C. CDM incentives

12. In order to evaluate whether a project belongs to Group 1 or Group 2, the financial attractiveness of the baseline needs to be compared with that of the project with the CDM incentives. This is not required in the current approved version of the additionality tool or the combined tool and the implementation of this requirement poses many challenges because the CDM incentives are neither well defined nor easily quantifiable for an investment analysis.

13. Incentives from the CDM can be broadly categorized into revenues from the CER sales and other benefits (e.g. improving the firm's reputation for marketing or public relations). For some projects, the main incentive for seeking the CDM status is the CER revenues, while for other projects, the other benefits from the CDM may play a considerable role in driving the project participants to request CDM registration.

1. CER revenues

14. If the CER revenues are the main incentive, to assess the financial indicator of a project with the CDM incentives, the CER revenues need to be estimated. To estimate the CER revenues, guidance is needed for two aspects:

(a) The quantity of CERs. If the numbers of CERs are based on ex-ante estimates, safeguards may be needed for cases where the ex-ante estimates are based on a different approach than the ex-post calculations.

(b) The price of CERs. It is also recognized that the price of the CER has fluctuated significantly in the history of the CDM as a result of limited possibility to accurately predict the potential supply and demand of the CERs. Consequently, the current price of CERs in the secondary markets may not reflect the expectations of the various optimistic/risk-seeking and pessimistic/risk-averse project participants for the duration of the crediting periods of their project activities.

15. The impacts of CER revenues were evaluated for 1,581 registered project activities which applied the investment benchmark analysis, according to the information (including CER prices, financial indicators without the CER revenues, financial indicators with the CER revenues, financial benchmarks) sourced from the project design documents (CDM-PDDs) and contained in the IGES CDM Investment Analysis Database dated 14 May 2012. For only 9 per cent of these projects, financial indicators with the CER revenues do not cross the applicable financial benchmarks.

2. Non-CER benefits

16. If it is claimed that the non-CER benefits are more significant, guidance is needed to assess this claim and to clarify the following issues:

(a) What non-CER benefits are realistic and credible?

(b) How may these non-CER benefits be assessed conservatively and objectively?

(c) If these non-CER benefits cannot be assessed conservatively and objectively for the relevant types of project activities, what alternative tests may be more appropriate than the investment analysis for the demonstration of additionality?

17. One alternative test to assess the impacts of the CERs has been implemented in the approved methodologies for the project activities in the transport sector. If less than 50 per cent of the total capital cost is from commercial entities, revenues from CERs per year are compared with the total annual operating and maintenance costs of the project. Only if the revenues of CERs are expected to constitute more than 10 per cent of the operating and maintenance costs, is it assumed that the CDM played an important role in proceeding with the project and the project activity is deemed additional.

D. Conclusions

18. In conclusion, the consideration of CDM benefits in the demonstration of additionality is warranted for the investment analysis in some cases, as one more additional safeguard for the environmental integrity of the investment analysis approach. The same rationale may be applicable to the requirement of the common practice test, which would not be necessary if the investment analysis could never result in erroneous conclusions when compared to the CMP definition of additionality. The additional safeguards reduce the number of “false positives” (i.e. projects that would be implemented regardless of the CDM, but would pass the additionality test).

19. However, the consideration of CDM benefits may not be feasible in the investment analysis due to many practical hurdles in the estimation of CER revenues. Also, in some project activities, for example, many benefits from the CDM cannot be quantified and included in the investment analysis, this would result in “false negatives” or “lost opportunities” (i.e. projects that would only be implemented due to the CDM, but do not pass the additionality test). They may increase the global costs of greenhouse gas abatement as they reduce the supply of CERs from the CDM.

20. Therefore, the consideration of CDM benefits in the investment analysis for the demonstration of additionality is ultimately a policy decision for the Board, balancing the potential “lost opportunities” and the potential “false positives” in accordance with the near-term and long-term objectives of the CDM, and eventually impacting the potential supply and the equilibrium price of CERs. It is also recognized that the stringency of this requirement would depend on the guidance on how to determine the CER price.

E. The way forward

21. Unfortunately, it is not possible to accurately quantify the potential “lost opportunities” and the potential “false positives”, as the additionality of a project activity cannot be observed or infallibly assessed. However, if the Board agrees that the potential “false positives” overweigh the potential “lost opportunities”, then the Board may wish to consider the following paragraphs as the way forward; otherwise, it is not necessary to implement any measure on this issue.

22. As mentioned in paragraphs 14 and 16 above, guidance from the Board is needed to undertake assessment of the CER revenues and the non-CER benefits to identify the project activities in Group 2. It may be acceptable if the financial attractiveness of the project with the CDM incentives is below but comparable to that of the baseline, and if both are much higher than the financial attractiveness of the project without the CDM incentives. Such comparative assessment would require thresholds to be defined by the Board.

23. For the other types of project activities in Group 2 (for which the CDM incentives make little difference to the financial attractiveness, and with or without the CDM incentives the project is still much

less attractive than the baseline) and the project activities in Group 3, the secretariat recommends that the Board either:

(a) Adopt alternative approaches for additionality demonstration; or

(b) Recognize that the additionality of these project activities cannot be established.

24. If certain types of project activities receive many benefits from the CDM which can be demonstrated but cannot be quantified and included in the investment analysis, the secretariat recommends that the Board:

(a) Identify these project types; and

(b) Adopt alternative approaches for additionality demonstration.

III. Forecast of fuel price

A. Relevant information

25. According to the "Guidelines on the assessment of investment analysis" (the "investment guidelines"), the period of assessment shall reflect the period of expected operation of the underlying project activity (technical lifetime) and the input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant. The investment guidelines implicitly require that the values of the input parameters should reflect the expected operation of the project activity for its technical lifetime, indicating the expectation of its financial and technical conditions at the time of the investment decision. This view is shared by the project participants and the designated operational entities (DOEs) of many project activities, and it is demonstrated by their use of forecast values for input parameters (e.g. electricity generation, operating and maintenance costs, and fuel costs) in the investment analysis.

26. It is observed that for the same fuel and the same host country during similar assessment periods, the annual escalation rate of the fuel costs varies significantly from 2 per cent to 10 per cent, as reported in the CDM-PDDs of all the five registered CDM project activities of that same host country under the methodology ACM0013 "Consolidated baseline and monitoring methodology for new grid connected fossil fuel fired power plants using a less GHG intensive technology". The minimum and maximum escalation rates would result in a relative difference of approximately 100 per cent in 10 years, i.e. the price in 10 years with an escalation rate of 10 per cent would be twice the price with an escalation rate of 2 per cent.

27. The investment guidelines require the application of a sensitivity analysis for variables that constitute more than 20 per cent of either total project costs or total project revenues. However, the role of a sensitivity analysis may be quite limited for the following reasons:

(a) In general, only the default range between -10 per cent and +10 per cent is applied. This range does not reflect the actual range of variation of fuel prices.

(b) If a scenario results in the project activity passing the benchmark or becoming the most financially attractive alternative, the only requirement is for the DOE to provide an assessment of the probability of the occurrence of this scenario compared to the likelihood of the assumptions in the presented investment analysis. The claim of additionality is not necessarily disapproved.

B. Recommendations to the Board

28. It is recognized that it is difficult to prescribe how to forecast fuel prices or other input parameters. The secretariat recommends that the Board either:

(a) Require that the values used in the investment analysis presented in the CDM-PDD should be consistent with the data used to substantiate requests for loans (if applicable); or

(b) Require the project participants to monitor the actual fuel costs, and other costs, revenues and key operational parameters of the project activity (e.g. capital costs, operating and maintenance costs, feedstock price or plant load factor) and compare these values with the ones used in the investment analysis in the CDM-PDD. The input values determined according to the actual expenses already made at the time of validation or long term contracts could be exempt from this monitoring requirement.

If there is a significant deviation between the input values used in the CDM-PDD and the actual values, then the Board may require the DOE to assess whether the actual values could have been predicted at the time of investment decision. If such a prediction is deemed reasonable, the Board may adopt procedures in relevant methodologies to adjust the baseline emissions depending on the outcome.

The relevant guidance could define thresholds for what constitutes a significant deviation. This proposal may be limited to certain types of project types, where the conclusion on additionality may be very sensitive to certain input parameters for the investment analysis.

IV. Inclusion of projects pending registration or under validation to determine the baseline technology

A. Relevant information

29. Assessment of the baseline scenario through a benchmark approach poses the question of whether to include the projects pending registration or under validation. Paragraph 48(c) of the CDM modalities and procedures defines the benchmark approach to estimate the baseline emissions as the average emissions of similar project activities 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. Paragraph 48(c) does not explicitly include or exclude the projects pending registration or under validation in the identification of baseline emissions.

B. Recommendations to the Board

30. Since only a limited number of methodologies implemented a benchmark approach and they included various levels of safeguards in the identification of the baseline scenario and in the demonstration of additionality, the secretariat recommends that the Board address this issue on a case-by-case basis in the methodologies. As more benchmark approaches are implemented in the methodologies and more experiences are gained, the Board may wish to work towards defining generic rules for the inclusion of projects pending registration or under validation.

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History of the document

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