DRAFT

Annex 8

DRAFT GUIDELINES ON THE APPLICATION OF MATERIALITY IN VERIFICATIONS

COVER NOTE

I. Introduction

A. Background

1. Development of guidelines on the application of materiality in verifications is one project under the "CDM management plan 2012", i.e. project number 155. It addresses the request from the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) to operationalize its decision 9/CMP.7, i.e. the "Materiality standard under the clean development mechanism".

2. In accordance with the original agreed timeline, draft guidelines are to be submitted to the clean development mechanism (CDM) Executive Board (hereinafter referred to as the Board) at its sixty-eighth meeting.

B. Objective

3. The objective of this note is to introduce the draft guidelines and highlight key elements, inform how stakeholders' inputs have been incorporated so far, and present two related issues.

II. Draft Guidelines

4. As a part of the development of the guidelines, a concept note on the application of materiality was presented to the Board at its sixty-seventh meeting. Stakeholders provided inputs on it and these, along with the Board's guidance, were used for the preparation of the draft guidelines.

5. The purpose of these guidelines will be to:

(a) Facilitate a uniform interpretation and application of the concept of materiality by designated operational entities (DOEs) in verifications;

(b) Improve transparency, consistency and efficiency in verifications and verification/certification reports submitted in the CDM project cycle.

II. KEY ELEMENTS

6. Materiality is an auditing concept to be applied by DOEs in verifications in order to detect errors, omissions or misstatements in emission reductions or removals being claimed by project participants in monitoring reports for project activities. Addressing such errors, omissions or misstatements has to follow usual requirements in the "CDM validation and verification standard" (VVS). This forms the basis for the scope of the guidelines, which is clearly defined in the guidelines.

7. Essential information for DOEs from the CMP's decision is incorporated in the guidelines, such as the definition of material information, the materiality thresholds and the required level of assurance (reasonable).

DRAFT

8. In addition to general information on materiality which is intended to facilitate the understanding the concept, the guidelines provide recommendations on how materiality should be considered and applied in planning and conducting verifications.

9. The guidelines indicate what should be reported by DOEs in verification/certification reports so that users (of reports) can understand how materiality was applied, and the regulatory body (the Board and secretariat) can assess it.

10. Finally, the guidelines include some examples and will contain (to be completed) a flowchart illustrating the application of materiality.

III. ENGAGEMENT WITH AND CONTRIBUTION FROM STAKEHOLDERS

11. Stakeholders have been consulted as follows:

(a) The secretariat provided information about the nature of the project and invited stakeholders to provide any inputs and examples before the Joint Workshop held in Bonn, Germany on 24–25 March 2012;

(b) A specific session on materiality was held in the Joint Workshop to discuss concepts and issues and exchanges views;

(c) The secretariat invited stakeholders to provide further inputs and examples after the Joint Workshop;

(d) A specific session on materiality was held at the 4th CDM Roundtable held in Bonn, Germany on 8 June 2012, to discuss a very first draft of the guidelines and exchange views;

(e) The secretariat invited stakeholders to provide any other inputs and examples after the Roundtable on the draft guidelines.

12. The workshop and roundtable were beneficial for the development of the guidelines. Stakeholders' inputs have been incorporated as appropriate. Most of examples included in the guidelines were submitted by DOEs.

13. There will be other opportunities for stakeholders to contribute to the preparation of the guidelines. Specifically, when the draft guidelines are posted as an annex to the annotated agenda of EB68 and EB69 as well as in the public call for inputs that is planned to be launched after EB68.

IV. RELATED ISSUES TO NOTE

A. Addressing deviations from registered monitoring plans

14. Stakeholders generally understood at the 4th CDM Roundtable that the application of materiality is an auditing concept for DOEs in order to detect errors, omissions, and misstatements, while how to address or correct them is handled in the VVS.

DRAFT

15. However, it has become clear that further guidance may be needed on how to address deviations from registered monitoring plans, by project participants, and how to assess them by DOEs before they are submitted to the Board. It was mentioned that materiality thresholds could be used for addressing such deviations.

16. Currently, requirements applicable to deviations from registered monitoring plans are contained in "Post registration changes" section in the "CDM project standard" (PS) and the VVS. Providing further guidance on how to assess deviations from registered monitoring plans would require revising the PS and VVS and/or developing specific guidelines, but distinct from the materiality guidelines presented with this note.

B. Application of materiality by the regulatory body in assessing requests for issuance

17. In its decision 9/CMP.7, the CMP also decided that materiality covers the assessment of requests for issuance by the regulatory body, but no guidance has been provided so far.

18. This CMP's request may be understood in two ways:

(a) To apply materiality in the assessment of each request for issuance, by assessing requests based on where the likelihood for material error may occur;

(b) To apply materiality at a higher level by deciding that a only certain number of requests for issuance, that meet some criteria as representing higher risks of errors, would be assessed; this could be the risk-based approach.

19. In both cases, more work is needed to have a clearer understanding of how materiality could be applied in actual cases. The outcomes may be to develop internal guidelines and/or revise existing assessment tools, such as check-lists.

V. WORK PLAN FOR THE GUIDELINES

20. The table below identifies the next steps and timelines for completing the guidelines:

Tasks	Timeline
(i) Submit the first draft of the guidelines to the Board	EB68 (mid July)
(ii) Launch a call for public inputs on the draft guidelines	July - August 2012 (4 weeks)
(iii) Review public inputs and develop the final draft of the guidelines	August 2012
(iv) Submit the final draft of the guidelines to the Board	EB69 (mid September)

VI. PROPOSED COURSE OF ACTION

21. The Board may consider providing feedback on the draft guidelines.

DRAFT

GUIDELINES ON THE APPLICATION OF MATERIALITY IN VERIFICATIONS

(Version 01.0)

CONTENTS

		Paragraphs	*Page*
I.	**Introduction**	**1–5**	**5**
	A. Background	1–4	5
	B. Objectives	5	5
II.	**Scope and applicability**	**6–7**	**5**
III.	**Terms and definitions**	**8**	**6**
IV.	**Requirements from the Materiality Standard**	**9–10**	**6**
V.	**Guidelines on the application of materiality in verifications**	**11–26**	**6**
	A. General information on the concept of materiality	11–15	6
	B. Consideration of materiality in planning the verification	16	7
	C. Consideration of materiality in conducting the verification	17–22	7
	D. Guidelines on reporting with the application of materiality	23–26	8
VI.	**Flowchart on the application of materiality in verifications**	**27**	**8**
VII.	**Examples of the application of materiality in verifications**	**28–31**	**9**
	A. Examples in verification planning	28–29	9
	B. Examples in conducting the verification	30–31	10

DRAFT

III. Introduction

A. Background

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) adopted at its seventh session decision 9/CMP.7, i.e. the "Materiality standard under the clean development mechanism" (hereinafter referred to as the Materiality Standard).

2. In adopting the Materiality Standard, the CMP decided, inter alia, that the scope of materiality under the clean development mechanism (CDM) initially covers the stage of verification by designated operational entities (DOEs).

3. In its decision, the CMP also requested the CDM Executive Board (hereinafter referred to as the Board) to increase its interaction with DOEs in order to facilitate a uniform interpretation and application of the concept of materiality with the overall view of increasing transparency and efficiency and reducing costs.

4. This document, the "Guidelines on application of materiality in verifications" (hereinafter referred to as these guidelines), addresses the CMP's request described in paragraph 3 above.

B. Objectives

5. The objectives of these guidelines are to:

(a) Facilitate a uniform interpretation and application of the concept of materiality by DOEs in verifications;

(b) Improve transparency, consistency and efficiency in verifications and verification/certification reports submitted in the CDM project cycle.

IV. Scope and applicability

6. These guidelines are applicable to DOEs for the verification of any type of CDM project activities.

7. They are not applicable to:

(a) The verification of programme of activities;

(b) The validation of project activities or programmes of activities;

(c) Uncertainties related to measurement; and

(d) Temporary deviations and permanent changes from the registered monitoring plan or applied methodology, regardless of whether corresponding emission reductions or removals are above or below materiality thresholds.[1]

[1] In cases of temporary deviations and permanent changes from the registered monitoring plan or applied methodology, DOEs should follow the applicable requirements in the "Post registration changes" section of the "CDM validation and verification standard" (VVS).

DRAFT

V. Terms and definitions

8. In addition to the definitions contained in the "Glossary of CDM terms", the following terms are used in these guidelines:

(a) Material information is a piece of information for which the omission, misstatement or erroneous reporting could change a decision by the Board;

(b) Reasonable assurance is a high, but not absolute, level of assurance;

(c) "Should" is used to indicate that among several possibilities, one course of action is recommended as particularly suitable;

(d) "May" is used to indicate what is permitted.

VI. Requirements from the Materiality Standard

9. The Materiality Standard prescribes that a DOE planning and conducting a verification using the concept of materiality shall achieve a reasonable level of assurance.

10. The Materiality Standard prescribes the thresholds for the application of materiality in verifications, by defining that information is material if it might lead, at an aggregated level, to an overestimation of the total emission reductions or removals achieved by a CDM project activity equal to or higher than:

(a) 0.5 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal of equal to or more than 500,000 tonnes of carbon dioxide equivalent per year;

(b) 1 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal between 300,000 and 500,000 tonnes of carbon dioxide equivalent per year;

(c) 2 per cent of the emission reductions or removals for large-scale project activities achieving a total emission reduction or removal of 300,000 tones of carbon dioxide equivalent per year or less;

(d) 5 per cent of the emission reductions or removals for small-scale project activities other than project activities covered under sub-paragraph (e) below;

(e) 10 per cent of the emission reductions or removals for the type of project activities that are referred to in decision 3/CMP.6, paragraph 38 (referred to as micro-scale project activities).

VII. Guidelines on the application of materiality in verifications

A. General information on the concept of materiality

11. Materiality is an auditing concept to be applied by DOEs in verifications in order to detect errors, omissions or misstatements in emission reductions or removals being claimed by project participants in monitoring reports.[2]

[2] Further background information on the concept of materiality can be found in Annex A of ISO 14064-3.

DRAFT

12. To achieve a balance between cost and time to conduct a verification, it is acceptable for DOEs to obtain a reasonable level of assurance on whether the claimed emission reductions or removals are free from material errors, omissions or misstatements.

13. Recognizing that circumstances may exist that could cause the information reported by project participants to be materially misstated, DOEs should plan and perform verifications with an attitude of professional skepticism and rely on their professional judgment while applying the concept of materiality.

14. Application of materiality and reasonable level of assurance imply that some data or information may not be checked. However, DOEs should design their verification and sampling plans to detect all material errors, omissions or misstatements, and any unchecked data or information should not contain any material immaterial errors, omissions or misstatements. A DOE's verification opinion applies to 100% of the data and information even though 100% of it may not have been checked.

15. Applying materiality does not mean that identified errors are not corrected: if an error, omission or misstatement is identified by the DOE, regardless of whether it is material or not, the DOE is required by the "CDM validation and verification standard" (VVS) to request project participants to correct it.

B. Consideration of materiality in planning the verification

16. In planning a verification the DOE should:

(a) Identify the materiality threshold in paragraph 10 above that corresponds to the amount of emission reductions or removals the specific type of CDM project activity will achieve;

(b) Understand the environment in which the project activity operates, the sources of project emissions and leakage within the project boundary, the monitoring activities, the equipment used to monitor or measure activity data, the origin and application of data used to calculate or measure the emissions, data flow, (quality / internal) control system, and the overall organisation with respect to monitoring and reporting;[3]

(c) Conduct a risk assessment to identify and assess the risks of individual or aggregated material errors, omissions or misstatements that may occur within the threshold based on elements in sub-paragraphs (a) and (b) above;

(d) Design verification and sampling plans and audit procedures[4] whose type, timing[5] and extent are based on and are responsive to the assessed risks of material errors, omissions or misstatements.

C. Consideration of materiality in conducting the verification

17. In conducting a verification the DOE should:

(a) Apply verification and sampling plans and audit procedures;

---

[3] Adapted from European Union. 2007. *Commission Decision of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council*.

[4] In accordance with paragraph 217 of the VVS.

[5] For example, timing may refer to the specific time periods / intervals for which the DOE may draw its samples.

DRAFT

(b) Assess detected errors, omissions and misstatements against the materiality threshold to determine whether they are material individually or in aggregate and if further audit procedures are needed.

18. If an error, omission or misstatement is detected, the DOE should be aware that it may not be an isolated occurrence and may be a systemic / re-occuring error. For example, others may exist if the DOE identifies that the error, omission or misstatement arose from a break down in the project participant's internal quality control and quality assurance system.

19. In cases where an immaterial error, omission or misstatement is detected, the DOE should determine whether additional audit procedures should be conducted in order to reach a reasonable level of assurance that the claimed emission reductions or removals are free from material error, omission or misstatement.

20. In cases where a material error, omission or misstatement is detected, the DOE may, depending on the circumstances of the error as per paragraph 18 above, request project participants to address it, or conduct additional audit procedures to confirm or determine the context and magnitude of the error, omission or misstatement and then request project participants to address it.

21. In both paragraphs 19–20 above, any errors, omissions or misstatements, material or immaterial, are to be corrected.

22. If further audit procedures are necessary, the DOE may consider whether the overall verification and sampling plans needs to be revised.

D. Guidelines on reporting with the application of materiality

23. The DOE should describe in its verification/certification report the risks, the risk assessment undertaken and how the verification and sampling plans were designed to respond to these risks and ensure that all material errors, omissions or misstatements are detected.

24. The DOE should also describe whether and how the verification and sampling plans were adjusted / revised to take into account the need for further audit procedures due to the nature / type of errors, omissions or misstatements detected.

25. The DOE should also document how materiality was applied in determining whether a detected error, omission or misstatement is material or immaterial either individually or in aggregate.

26. The DOE should state in its verification/certification opinion that the claimed emission reductions or removals are free from material errors, omissions or misstatements, with a reasonable level of assurance.

VIII. Flowchart on the application of materiality in verifications

27. The following flowchart illustrates how materiality should be applied by DOEs in verifications.

To be developed/inserted

DRAFT

IX. Examples of the application of materiality in verifications

A. Examples in verification planning

28. Example #1:

In planning the verification, the DOE should identify and assess the risks of individual or aggregated material errors, omissions or misstatements. Examples of potential causes of risk may include:[6]

(a) Human error in the quantification of emissions (which may be more likely to occur if personnel are unfamiliar with, or not well-trained regarding, emissions processes or data recording);

(b) Undue reliance on a poorly designed information system, which may have few effective quality controls, for example, the use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security, etc.;

(c) Manual adjustment of otherwise automatically recorded activity levels, for example, manual input may be required if a flare meter becomes overloaded.

The DOE may design its verification to respond to the assessed risks by applying the following audit techniques:

(a) Depending on the monitoring period being audited, conduct increased sampling during the months when there is a greater likelihood for errors and issues with data quality control due to project participant leave schedules;

(b) Depending on how data is generated, processed, and reported, place greater emphasis on verifying data captured and processed manually and / or in spreadsheets versus those that are generated from an automated system.

29. Example #2:[7]

(a) The project is a large-scale project achieving total emission reductions of <300,000 tonnes of CO2e, per annum, as such a 2% materiality level is applied.

(b) The verification of this project requires the verification of emissions from only three sources. From an initial review of top-level data, the first emission source reportedly account for 88.2% of the total emissions, the second source accounts for 10% of the total emissions and the third source reportedly accounts for 1.8% of the total emissions (i.e. less than the materiality level of 2%).

(c) Based on the DOEs knowledge of how the project participant, collects, processes, and reports data for each source, the DOE determines that the second source (accounting for 10% of total emissions) has the highest potential for misstatements since the data is

[6] Drawn from ISAE 3410, Assurance Engagements on Greenhouse Gas Statements (Exposure draft - January 2011).

[7] Adapted from an example provided by the Designated Operational Entities and Independent Entities Association (D&IA).

manually recorded into a spreadsheet. The other two sources use automated data feeds to record the data.

(d) The verification plan is therefore designed to ensure that the majority of time to test and detect potential misstatements is spent on verifying the source with the highest risk for potential misstatements versus the first and third sources that together account for 90% of total emissions.

B. Examples in conducting the verification

30. Example #3 - Identification and correction of immaterial errors:[8]

(a) The project is a large-scale project achieving total emission reductions of 400,000 tonnes of CO2e, per annum, as such a 1% materiality level is applied.

(b) During the course of the verification, errors are identified within a data set and are identified to have been caused by errors in manual transposition.

(c) Due to the cause, these errors are easily quantified, and are identified to represent an error of 0.5% of the total emissions (i.e. less than the materiality level of 1%).

(d) Despite these errors being less than the materiality level of 1%, the DOE informs the project participants that the data set contains errors that must be corrected. These errors are corrected by the project participants and the DOE confirms the corrections and decides to test another sample of data in order to be confident that no additional errors are present in the data set (that when aggregated with other detected areas could be material).

(e) No further errors are identified with the data set, and the DOE proceeds with the remaining elements of the verification as defined in their verification plan.

31. Example #4 - Identification and correction of material errors:[9]

(a) The project is a large-scale project achieving total emission reductions of >500,000 tonnes of CO2e, per annum, as such a 0.5% materiality level is applied.

(b) During the course of the verification, errors are identified within a data set caused by erroneous meter readings. These errors are quantified to represent an error of 1% of the total emissions (i.e. more than the materiality level of 0.5%).

(c) The DOE informs the project participants that the data set contains errors that must be corrected.

(d) The errors are caused by a failure of the meter to provide updated readings at the defined frequency and have resulted in the last consumption reading being repeated for a period. The monitoring plan defines the approach to be applied in these circumstances and the project participants correct the data set in accordance with the defined approach.

(e) The DOE confirms the corrections are in accordance with the monitoring plan and continues with the verification of the same data set. No further errors are identified with

[8] Provided by D&IA.
[9] Provided by D&IA.

DRAFT

the data set, the verifier confirms the data set to be free from material error and proceeds with the verification as defined in their verification plan.

- - - - -

History of the document

Version	Date	Nature of revision
01.0	2 July 2012	Initial publication as an annex to the annotated agenda of EB68.
Decision Class: Regulatory **Document Type:** Guideline **Business Function:** Issuance		