



Annex 1

CLEAN DEVELOPMENT MECHANISM
VALIDATION AND VERIFICATION MANUAL

(Version 01.21)

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Abbreviations

AE	Applicant entity
A/R	Afforestation and reforestation
CAR	Corrective action request
CDM	Clean development mechanism
CDM EB	CDM Executive Board
CER	Certified emission reduction
CL	Clarification request
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CPA	CDM programme activity
DOE	Designated operational entity
DNA	Designated national authority
FAR	Forward action request
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
PoA	Programme of activities
PDD	Project Design Document
PP	Project Participant
UNFCCC	United Nations Framework Convention on Climate Change



I. Introduction

1. The Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP) at its second session, through its decision 1/CMP.2¹ requested the Executive Board (hereinafter referred to as the CDM Executive Board) to develop guidance for designated operational entities on verification and validation in order to promote quality and consistency in verification and validation reports. The CMP at its third session² requested the CDM Executive Board of the clean development mechanism “to conclude, as its highest priority, the validation and verification manual as a standard for designated operational entities” (DOEs). The CDM Executive Board, at its forty-fourth meeting, approved the clean development mechanism (CDM) validation and verification manual (hereinafter referred as the Manual) for DOEs for their validation and verification work.

2. The document provides requirements to DOEs for their validation and verification work and promotes quality and consistency in the preparation of their validations and verification reports.

3. In carrying out their validation and verification work, DOEs shall follow this Manual and shall integrate its provisions into their quality management systems.

4. In carrying out their validation and verification work, DOEs shall ensure that each project activity meets all applicable CDM requirements. The CDM requirements include the CDM modalities and procedures and subsequent decisions by the CMP and documents released by the CDM Executive Board and available on the UNFCCC CDM website (together referred to as CDM requirements).

5. Applicant entities (AEs) that apply for accreditation/designation as a Designated Operational Entity shall follow relevant provisions of this Manual when carrying out activities that are witnessed for obtaining accreditation and shall integrate its provisions into their quality management systems.

A. Updates to the Manual

6. Taking into consideration the evolving nature of the CDM, the CDM Executive Board, at its forty-ninth meeting agreed to the following approach to update the Manual:

- (a) A review of the document on a six month basis would be undertaken in the future. The scope of such a review would include the appropriate incorporation of evolving decisions of the CDM Executive Board and also allow minor editorial consistency checks;
- (b) A more comprehensive revision of the document would take place every two years. The scope of this type of revision would allow the incorporation of all relevant decisions of the CDM Executive Board, undertake comprehensive editorial, technical and legal consistency check as well as any other relevant changes to improve the user-friendliness of the Manual.

¹ See decision 1/CMP.2, “Further guidance relating to the clean development mechanism”.

² See decision 2/CMP.3, “Further guidance relating to the clean development mechanism”.



II. Terms for validating and verifying information provided by project participants

1. Accurate

7. Checking for accuracy means:

- (a) For quantitative data and information: minimizing bias and uncertainty in the measurement process and the processing of data;
- (b) For non-quantitative information: minimizing bias in favour of a particular result.

2. Conservative

8. Information can be considered as conservative if the GHG emission reductions or removal enhancements of a project activity are not overestimated.

3. Relevant

9. Information can be considered relevant if it ensures compliance with the CDM requirements and the quantification and reporting of emission reductions achieved by a project activity. Unnecessary data and assumptions that do not have an impact on the emission reductions are not considered as relevant.

4. Credible

10. Information can be considered credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence.

5. Reliable

11. Information can be considered reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis.

6. Completeness

12. Completeness refers to inclusion of all relevant information for assessment of GHG emissions reductions and the information supporting the methods applied as required.

7. Validation/verification opinion

13. Formal written declaration to the intended user that provides assurance on the opinion relating to the GHG emission reductions or removal enhancements of a project activity.

III. Principles for validation and verification

14. DOEs shall apply the following principles in performing validation and verification and in preparing validation and verification reports.

1. Consistency

15. Consistency is achieved by:

- (a) Applying uniform criteria to the requirements of the applicable approved methodology throughout the crediting period(s);



- (b) Applying uniform criteria among project activities with similar characteristics such as a similar application of the approved methodology, use of technology, time period or region;
- (c) Applying uniform criteria to expert judgements, over time and among projects.

16. The principle of consistency shall not prevent a DOE from applying the most recent decisions and guidance provided by the CDM Executive Board.

2. Transparency

17. Information in the validation and verification reports shall be presented in an open, clear, factual, neutral and coherent manner based on documentary evidence.

18. Transparency requires DOEs to:

- (a) Clearly and explicitly state and document all assumptions;
- (b) Clearly reference background material;
- (c) Clearly identify changes made to documentation.

3. Impartiality, independence and safeguarding against conflicts of interest

19. DOEs shall remain independent of the project activity being validated or verified. They shall also remain free from bias and any real or potential conflict of interest.

20. Appendix A to the CDM modalities and procedures specifies that DOEs shall work in a credible, independent, non-discriminatory and transparent manner. The structure of the DOE shall safeguard the impartiality of its operations. If the DOE is part of a larger organization, the DOE shall clearly define the links with other parts of the organization to demonstrate that no conflicts of interest exist. DOEs shall remain free of any commercial, financial or other processes that influence its judgement or endanger trust in its independence and integrity.³

21. DOEs shall base their findings and conclusions upon objective evidence and shall conduct all activities in connection with the validation and verification processes in accordance with the rules and procedures of the COP/MOP and the CDM Executive Board.

22. In their reports, DOEs shall truthfully and accurately state their validation or verification activities, findings and conclusions.

4. Confidentiality

23. In accordance with the CDM requirements, DOEs shall safeguard the confidentiality of all information obtained or created during validation or verification.⁴

³ See EB 31 report, paragraph 11, currently located at <<http://cdm.unfccc.int/EB/031/eb31rep.pdf>> and EB 33 report, paragraph 13, currently located at <<http://cdm.unfccc.int/EB/033/eb33rep.pdf>> for the decision of the CDM Executive Board on the use of laboratories and calibration services for CDM projects by DOEs.

⁴ See decision 3/CMP.1, annex “Modalities and procedures for a clean development mechanism”, currently located at <<http://cdm.unfccc.int/Reference/COPMOP/08a01.pdf#page=6>>.



IV. Additional roles of designated operational entities

24. The CDM Executive Board, has entrusted DOEs with the functions below in addition to validation and verification:

- (a) Undertaking voluntary pre-assessment of new baseline and monitoring methodologies in accordance with the EB 21 report, paragraph 14,⁵
- (b) Identifying and submitting requests for deviation in accordance with the EB 49 report, annexes 26 and 27.⁶

25. In response to reviews of project activities associated with validation or verification requirements⁷ and requests for clarification from the CDM Executive Board, DOEs shall provide a response and where possible the additional information requested.

V. CDM validation

A. Objective of CDM validation

26. The purpose of validation is to ensure a thorough, independent assessment of proposed CDM project activities submitted for registration as a proposed CDM project activity against the applicable CDM requirements.

27. The DOE shall report the results of its assessment in a validation report. The DOE shall submit this validation report, along with the supporting documents to the CDM Executive Board as part of the request for registration of a project activity as a proposed CDM project activity.

28. The validation report shall include a positive validation opinion only if the proposed CDM project activity complies with the applicable CDM requirements.

B. Validation approach

29. The CDM is a rules-based mechanism. Therefore, it shall be the DOE's responsibility to ensure that, in accordance with this Manual and CDM requirements, these rules are complied with for any project activities requesting registration as a proposed CDM project activity.

30. During validation, the DOE shall assess whether the project design of the proposed CDM project activity meets the CDM requirements. For this, the DOE shall, using objective evidence, assess the completeness and accuracy of the claims and conservativeness of the assumptions made in the project design document (PDD). The evidence used in this assessment shall not be limited to that provided by the project participants.

31. In assessing evidence, the DOE shall not omit evidence that is likely to alter the validation opinion. In the assessment of evidence, the DOE shall use the acceptable approaches as specified in chapter V, section E below, and the DOE shall ensure that the project activity complies with the relevant

⁵ See the document currently located at <<http://cdm.unfccc.int/EB/021/eb21rep.pdf>>.

⁶ See the documents "Procedures for requests for deviation prior to submitting request for issuance" and "Form for submission of requests for deviation prior to submitting request for issuance F-CDM-DEV-ISS" currently located at <http://cdm.unfccc.int/EB/049/eb49_repan26.pdf> and <http://cdm.unfccc.int/EB/049/eb49_repan27.pdf>.

⁷ See decision 4/CMP.1 relating to procedures for review as referred to the modalities and procedures of the clean development mechanism, paragraph 41.



requirements set out in the CDM modalities and procedures, the applicability conditions of the selected methodology and guidance issued by the CDM Executive Board before submitting a request for registration.

32. In case the validation report includes a negative validation opinion the DOE shall provide the project participants with the report and inform the CDM Executive Board of the outcome.

C. Validation methods

1. Means of validation

33. The DOE shall apply standard auditing techniques to assess the correctness of the information provided by the project participants, including, where appropriate, but not limited to:

- (a) Document review, involving:
 - (i) A review of data and information to verify the correctness, credibility and interpretation of presented information;
 - (ii) Cross checks between information provided in the PDD and information from sources other than that used, if available, and if necessary independent background investigations.
- (b) Follow-up actions (e.g. on site visit and telephone or email interviews), including:
 - (i) Interviews with relevant stakeholders in the host country, personnel with knowledge of the project design and implementation;
 - (ii) Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted from the validation.
- (c) Reference to available information relating to projects or technologies similar to the proposed CDM project activity under validation;
- (d) Review, based on the approved methodology being applied, of the appropriateness of formulae and correctness of calculations.

2. Clarification requests, corrective action requests and forward action requests

34. If, during the validation of a project activity, the DOE identifies issues that need to be further elaborated upon, researched or added to in order to confirm that the project activity meets the CDM requirements and can achieve credible emission reductions, the DOE shall ensure that these issues are correctly identified, discussed and concluded in the validation report.

35. The DOE shall raise a corrective action request (CAR) if one of the following occurs:

- (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- (b) The CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.



36. The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

37. The DOE shall raise a forward action request (FAR) during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

38. The DOE shall resolve or “close out” CARs and CLs only if the project participants modify the project design, rectify the PDD or provide adequate additional explanations or evidence that satisfy the DOE’s concerns. If this is not done, the DOE shall not recommend the project activity for registration to the CDM Executive Board.

39. The DOE shall report on all CARs, CLs and FARs in its validation report. This reporting shall be undertaken in a transparent and unambiguous manner that allows the reader to understand the nature of the issue raised, the nature of the responses provided by the project participants, the means of validation of such responses and clear reference to any resulting changes in the PDD or supporting annexes.

D. Stakeholder consultation process

40. The DOE shall make the PDD of the project activity under consideration publicly available in accordance with the latest version of the “Procedures for processing and reporting on validation CDM project activities”.⁸

41. During the validation of the project activity, the DOE shall take into account the comments received and the validation report shall include details of actions taken to take due account of the comments during the validation process.

42. If comments are not sufficiently substantiated or if they indicate that the project activity does not comply with the CDM requirements, then the DOE shall request further clarification from the entity providing the comment. However, the DOE is not required to enter into a dialogue with Parties, stakeholders or NGOs that comment on the CDM requirements. If no additional information or substantiation is provided in response to a request for clarification, the DOE shall proceed to assess the comments as originally provided.

E. Validation requirements based on paragraph 37 of the CDM modalities and procedures

43. In carrying out its validation work, the DOE shall ensure that the project activity complies with the requirements of paragraph 37 of the CDM modalities and procedures.

1. Approval

(i) Requirement to be validated

44. All Parties involved have approved the project activity.

⁸ See the document currently located at <http://cdm.unfccc.int/Reference/Procedures/valid_proc02.pdf>.

(ii) Means of validation

45. The DOE shall determine whether the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD has provided a written letter of approval. The DOE shall determine whether each letter confirms that:

- (a) The Party is a Party to the Kyoto Protocol;
- (b) Participation is voluntary;
- (c) In the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country;
- (d) It refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

46. The DOE shall determine whether the letter(s) of approval is unconditional with respect to (a) to (d) above.

47. The DOE shall ~~confirm determine whether that~~ the letter(s) of approval has been issued by the respective Party's designated national authority (DNA) and ~~if in doubt, shall verify with the DNA that the letter of approval~~ is valid for the proposed CDM project activity under validation. A list of DNAs is available on the UNFCCC CDM website.⁹

48. If the DOE doubts the authenticity of the letter of approval, the DOE shall verify with the DNA that the letter of approval is authentic.

(iii) Reporting requirements

49. The validation report shall, for each Party involved:

- (a) Indicate whether a letter of approval has been received, with clearly referencing the letter itself and any supporting documentation;
- (b) Indicate whether the DOE received this letter from the project participants or directly from the DNA;
- (c) Indicate the means of validation employed to assess the authenticity if paragraph 48 above applies;
- (d) Contain a clear statement regarding whether the DOE considers the letters are in accordance with paragraphs 45–48 above.

⁹ See the list currently located at <<http://cdm.unfccc.int/index.html>>.



50. If letters of approval contain additional specification of the project activity, such as the PDD version number, then the request for registration shall be made on the basis of the documents specified in the letter. If a letter of approval refers to a specific version of the validation report and the DOE therefore is unable to submit this precise version of the validation report, the DOE shall take one of the following options:

- (a) Insert a statement in the validation report to indicate that the final letter of approval has not been received and that a request for registration will not be submitted until it has been received;
- (b) Update the validation report to reflect the receipt of the letter of approval. If this option is chosen, validation report major number shall remain unchanged and the minor number shall be increased. The validation report shall contain confirmation that this is the only change that has been made to the version referred to in the letter of approval.

2. Participation

(i) Requirement to be validated

51. All project participants have been listed in a consistent manner in the project documentation, and their participation in the project activity has been approved by a Party to the Kyoto Protocol.¹⁰

(ii) Means of validation

52. The DOE shall confirm that the project participants are listed in tabular form in section A.3 of the PDD and that this information is consistent with the contact details provided in annex 1 of the PDD. The DOE shall determine whether the participation of each project participant has been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation. The DOE shall confirm that no entities other than those approved as project participants are included in these sections of the PDD.

53. The DOE shall ensure that the approval of participation has been issued from the relevant DNA and if in doubt shall verify with the DNA that the approval of participation is valid for the proposed CDM project participant.

(iii) Reporting requirements

54. The validation report shall, for each project participant:

- (a) Indicate whether the participation has been approved by a Party to the Kyoto Protocol;
- (b) Describe the means of validation employed to draw this conclusion.

3. Project design document

(i) Requirement to be validated

55. The PDD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.¹¹

¹⁰ See EB 50 report, paragraph 66, and its annex 48, paragraphs 7-9, currently located at <<http://cdm.unfccc.int/EB/050/eb50rep.pdf>> and <http://cdm.unfccc.int/EB/050/eb50_repan48.pdf>, for contractual relationships between DOEs and PPs.



(ii) Means of validation

56. The DOE shall determine whether the PDD is in accordance with the applicable CDM requirements for completing PDDs.¹²

(iii) Reporting requirements

57. The validation report shall contain a statement regarding the compliance of the PDD with relevant forms and guidance.¹³

4. Project description

(i) Requirement to be validated

58. The PDD shall contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.

(ii) Means of validation

59. The DOE shall confirm that the description of the proposed CDM project activity as contained in the PDD sufficiently covers all relevant elements, is accurate and that it provides the reader with a clear understanding of the nature of the proposed CDM project activity.

60. For proposed CDM project activities in existing facilities or utilizing existing equipments, the DOE shall conduct a physical site inspection to confirm that the description in the PDD reflects the proposed CDM project activity for the following types of CDM project activities unless other means are specified in the methodology:

- (a) Large scale projects;
- (b) Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year;
- (c) Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes per year; in such case the number of physical site visits may however be based on sampling, if the sampling size is appropriately justified through statistical analysis.

61. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year the DOE may conduct a physical site visit as appropriate.

62. For all other proposed CDM project activities not referred to in paragraphs 59–61, the DOE shall undertake the validation by reviewing available designs and feasibility studies and may conduct comparison analysis to equivalent projects, as appropriate. The DOE may conduct physical site visit to assess the plan. For proposed CDM project activities for which the DOE does not undertake a physical site inspection this shall be appropriately justified.

¹¹ See forms currently located at <http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/index.html>.

¹² See guidelines currently located at <<http://cdm.unfccc.int/Reference/Guidclarif/pdd/index.html>>.

¹³ See guidelines currently located at <<http://cdm.unfccc.int/Reference/Guidclarif/pdd/index.html>>.



63. If the proposed CDM project activity involves the alteration of an existing installation or process, the DOE shall ensure that the project description clearly states the differences resulting from the project activity compared to the pre-project situation.

(iii) Reporting requirements

64. The validation report shall:

- (a) Describe the process undertaken to validate the accuracy and completeness of the project description;
- (b) Contain the DOE's opinion on the accuracy and completeness of the project description.

5. Baseline and monitoring methodology

(a) General requirement

65. The DOE shall ensure that the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board.¹⁴

66. To ensure that the project activity meets this general requirement, the DOE shall determine whether:

- (a) The selected methodology is applicable to the project activity;
- (b) The PP has correctly applied the selected methodology.

67. The DOE shall ensure that the selected methodology applies to the project activity and has been correctly applied with respect to following:

- (a) Project boundary;
- (b) Baseline identification;
- (c) Algorithms and/or formulae used to determine emission reductions;
- (d) Additionality;¹⁵
- (e) Monitoring methodology.¹⁶

¹⁴ See EB 52 report, paragraphs 34 and 35 and annexes 9 to 13, currently located at <<http://cdm.unfccc.int/EB/052/eb52rep.pdf>>. If the DOE determines that project participants intend to use a new baseline and monitoring methodology, it shall, before submitting a request for registration of the project activity, forward the proposed methodology, together with the draft PDD, to the CDM Executive Board for review, in accordance with the latest procedure and related forms for submitting and considering proposed new methodologies currently located at <http://cdm.unfccc.int/Reference/Procedures/meth_proc02_v13.pdf> <http://cdm.unfccc.int/Reference/Procedures/meth_proc05.pdf> and <http://cdm.unfccc.int/Reference/PDDs_Forms/Methodologies/lsforms.html>.

¹⁵ See Chapter V, sections E6 below.

¹⁶ See Chapter V, sections E7 below.



(b) Applicability of the selected methodology to the project activity

(i) Requirement to be validated

68. The DOE shall validate that the selected baseline and monitoring methodology previously approved by the CDM Executive Board is applicable to the project activity, including that the used version is valid.¹⁷

69. The DOE shall apply specific guidance provided by the CDM Executive Board in respect to any approved methodology.

(ii) Means of validation

70. The DOE shall determine whether the methodology is correctly quoted and applied by comparing it with the actual text of the applicable version of the methodology available on the UNFCCC CDM website.

71. A selected approved methodology applies to the project activity if the applicability conditions of the methodology are met and the project activity is not expected to result in emissions other than those allowed by the methodology. The DOE shall determine whether the choice of methodology is justified and the project participants have shown that the project activity meets each of the applicability conditions of the approved methodology or any tool or other methodology component referred to therein. This shall be done by validating the documentation referred to in the PDD and by verifying that its content is correctly quoted and interpreted in the PDD. If the DOE, based on local and sectoral knowledge, is aware that comparable information is available from sources other than that used in the PDD, then the DOE shall cross check the PDD against the other sources to confirm that the project activity meets the applicability conditions of the methodology.

72. If the DOE cannot make a determination regarding the applicability of the selected methodology to the proposed CDM project activity then the DOE shall request clarification of the methodology in accordance with the guidance provided by the CDM Executive Board.¹⁸

¹⁷ See EB 54 report, paragraphs 22 and 23, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH50MD8RL19WBU60Y>>, and its annex 2 “Procedure for the submission and consideration of requests for revision of approved baseline and monitoring methodologies and tools for large scale CDM project activities” and annex 3 “Procedure for the submission and consideration of requests for revision of approved baseline and monitoring methodologies and tools for A/R CDM project activities”, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/EOZ5A4PIVHJTFNMDBYC2W87KG9LX3U>> and <<https://cdm.unfccc.int/UserManagement/FileStorage/103TUEM7LXHQ59FGVY4O62PIAWZRJN>> for submission and consideration procedures. In accordance with the procedures for the revision of an approved baseline or monitoring methodology by the Executive Board, currently located at <<http://cdm.unfccc.int/Reference/Procedures/index.html>>, any revision to an approved methodology or a tool referred to in a methodology shall only be applicable to project activities registered after the revision and shall not affect (1) registered CDM project activities during their crediting period or (2) project activities that have been published for public comments for validation using an approved methodology or tool, so long as the project activity is submitted for registration within eight months of the effective date of the revision of the methodology.

¹⁸ See EB 31, annex 12, “Clarification for project participants on when to request a revision, clarification to an approved methodology or deviation”, currently located at <http://cdm.unfccc.int/EB/031/eb31_repan12.pdf>, and EB 27, annex 10, “Guidance on criteria for consolidations and revision of methodologies”, currently located at <http://cdm.unfccc.int/EB/027/eb27_repan10.pdf>.



73. If the DOE determines that the proposed CDM project activity does not comply with the applicability conditions of the methodology the DOE may proceed by means of requesting revision to or deviation from the methodology in accordance with the guidance provided by the CDM Executive Board.¹⁹

74. If the DOE has requested clarification of, revision to or deviation from a methodology, the DOE shall not submit a request for registration until the CDM Executive Board has approved the proposed deviation or revision.

75. Under no circumstance shall the DOE consider the submission of a request for registration as a means of seeking clarification from the CDM Executive Board on the applicability of a methodology.

(iii) Reporting requirements

76. For each applicability condition listed in the approved methodology selected, the DOE shall clearly describe in the validation report the steps taken to assess the relevant information contained in the PDD against these criteria. The validation report shall include an unambiguous validation opinion regarding the applicability of the selected methodology to the proposed CDM project activity.

77. The validation report shall contain information regarding greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

(c) Project boundary

(i) Requirement to be validated

78. The PDD shall correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity.

(ii) Means of validation

79. Based on documented evidence and corroborated by a site visit where required by paragraphs 59–62 above, the DOE shall determine whether the delineation in the PDD of the project boundary is correct and meets the requirements of the selected baseline methodology. The DOE also shall confirm that all sources and GHGs required by the methodology have been included within the project boundary. If the methodology allows project participants to choose whether a source or gas is to be included within the project boundary, the DOE shall determine whether the project participants have justified that choice. The DOE shall confirm that the justification provided is reasonable, based on assessment of supporting documented evidence provided by the project participants and corroborated by observations if required.

(iii) Reporting requirements

80. In the validation report, the DOE shall describe how the validation of the project boundary has been performed, by detailing the documentation assessed (e.g. a commissioning report) and by describing

¹⁹ See EB 31, annex 12, “Clarification for project participants on when to request a revision, clarification to an approved methodology or deviation”, currently located at < http://cdm.unfccc.int/EB/031/eb31_repan12.pdf>, and EB 27, annex 10, “Guidance on criteria for consolidations and revision of methodologies”, currently located at < http://cdm.unfccc.int/EB/027/eb27_repan10.pdf>.

its observations during any site visit undertaken in accordance with paragraphs 59–62 above (i.e. observations of the physical site or equipment used in the process). The DOE shall provide a statement whether the identified boundary and the selected sources and gases are justified for the project activity. Should the DOE identify emission sources that will be affected by the project activity and are not addressed by the selected approved methodology, the DOE shall request clarification of, revision to or deviation from the methodology, as appropriate, as described in paragraph 73 above.

(d) Baseline identification

(i) Requirement to be validated

81. The PDD shall identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity.

82. The DOE shall confirm that any procedure contained in the methodology to identify the most reasonable baseline scenario, has been correctly applied. If the selected methodology requires use of tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario, the DOE shall consult the methodology on the application of these tools. In such cases, the guidance in the methodology shall supersede the tool. The DOE shall check each step in the procedure described in the PDD against the requirements of the methodology.

(ii) Means of validation

83. If the methodology requires several alternative scenarios to be considered in the identification of the most reasonable baseline scenario, the DOE shall, based on financial expertise and local and sectoral knowledge, determine whether all scenarios that are considered by the project participants and are supplementary to those required by the methodology, are reasonable in the context of the proposed CDM project activity and that no reasonable alternative scenario has been excluded.

84. The DOE shall determine whether the baseline scenario identified is reasonable by validating the assumptions, calculations and rationales used, as described in the PDD. It shall ensure that documents and sources referred to in the PDD are correctly quoted and interpreted. The DOE shall cross check the information provided in the PDD with other verifiable and credible sources, such as local expert opinion, if available.

85. The DOE shall determine whether all applicable CDM requirements have been taken into account in the identification of the baseline scenario for the proposed CDM project activity, including “relevant national and/or sectoral policies and circumstances.”²⁰ Drawing on its knowledge of the sector and/or advice from local experts, the DOE shall confirm that all relevant policies and circumstances have been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board.

²⁰ See decision 3/CMP.1, annex, paragraph 45, currently located at <<http://cdm.unfccc.int/Reference/COPMOP/08a01.pdf#page=6>>, and EB 22, annex 3, “Clarifications on the consideration of national and /or sectoral policies and circumstances in baseline scenarios”, currently located at <http://cdm.unfccc.int/EB/022/eb22_repan3.pdf>.



86. The DOE shall determine whether the PDD provides a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity.

(iii) Reporting requirements

87. The DOE shall clearly describe in the validation report the steps taken to assess the requirement given in paragraphs 81 and 82 above and shall provide an opinion as to whether:

- (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
- (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

88. The validation report shall clearly describe other steps taken, and sources of information used, by the DOE to cross check the information contained in the PDD on this matter.

(e) Algorithms and/or formulae used to determine emission reductions

(i) Requirement to be validated

89. The steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions shall comply with the requirements of the selected baseline and monitoring methodology.

(ii) Means of validation

90. The DOE shall determine whether the equations and parameters in the PDD have been correctly applied by comparing them to those in the selected approved methodology. If the methodology provides for selection between different options for equations or parameters, the DOE shall confirm that adequate justification has been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided) and that the correct equations and parameters have been used, in accordance with the methodology selected.

91. The DOE shall verify the justification given in the PDD for the choice of data and parameters used in the equations. If data and parameters will not be monitored throughout the crediting period of the proposed CDM project activity but have already been determined and will remain fixed throughout the crediting period, the DOE shall assess that all data sources and assumptions are appropriate and calculations are correct, applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions. If data and parameters will be monitored on implementation and hence become available only after validation of the project activity, the DOE shall confirm that the estimates provided in the PDD for these data and parameters are reasonable.



(iii) Reporting requirements

92. The DOE shall clearly describe in the validation report the steps taken to assess the requirement outlined in paragraph 89 above and shall provide an opinion as to whether:

- (a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;
- (c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

93. The validation report shall clearly describe how the DOE has verified the data and parameters used in the equations, including references to any other data sources used.

6. Additionality of a project activity

(i) Requirement to be validated

94. The PDD shall describe how a proposed CDM project activity is additional.²¹

(ii) Means of validation

95. The DOE shall assess and verify the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by project participants to support the demonstration of additionality. This requires the DOE to critically assess the presented evidence, using local knowledge and sectoral and financial expertise.

96. The DOE shall consider tools and documents provided by the CDM Executive Board to demonstrate the additionality of proposed CDM project activities, as well as specific complementary or alternative requirements included in approved CDM methodology.

(iii) Reporting requirements

97. The validation report shall clearly describe all steps taken, and sources of information used, by the DOE to cross-check the information contained in the PDD on this matter. The validation report shall

²¹ In accordance with decision 3/CMP.1, annex, paragraph 43 “A CDM project activity is 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”. Note that for A/R CDM project activities: “An afforestation or reforestation project activity under the CDM is additional if the actual net greenhouse gas removals by sinks are increased above the sum of the changes in carbon stocks in the carbon pools within the project boundary that would have occurred in the absence of the registered CDM afforestation or reforestation project activity” (see decision 5/CMP.1, annex, paragraph 18). While specific elements of the assessment of additionality are discussed in further detail in paragraphs 98–121 below, not all elements discussed below will be applicable to all proposed CDM project activities.



contain information regarding how the DOE has determined that the documentation assessed is authentic, where appropriate.

(a) Prior consideration of the clean development mechanism

(i) Requirement to be validated

98. If the project activity start date is prior to the date of publication of the PDD for stakeholder comments it shall be demonstrated that the CDM benefits were considered necessary in the decision to undertake the project as a proposed CDM project activity.

(ii) Means of validation

99. The DOE shall confirm that the start date of the project activity, reported in the PDD, is in accordance with the “Glossary of CDM terms”.²² If the reported date is not in accordance with the glossary, the DOE shall raise a CAR to ensure that the start date is correctly reported in a revised PDD. In particular, for project activities that require construction, retrofit or other modifications, the date of commissioning cannot be considered the project activity start date.

100. The DOE, in accordance with the guidance from the CDM Executive Board²³, shall determine whether it is a new project activity (a project activity with a start date on or after 02 August 2008) or an existing project activity (a project activity with a start date before 02 August 2008).

101. For a new project activity, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, the DOE shall ensure by means of confirmation from the UNFCCC secretariat that PPs had informed the host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status.²⁴ If such a notification has not been provided by the project participants within six months of the project activity start date, the DOE shall determine that the CDM was not seriously considered in the decision to implement the project activity.

102. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, the DOE shall assess the project participant’s prior consideration of the CDM through document reviews and shall satisfy following requirements:

- (a) Evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project. Evidence to support this would include, inter alia, minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity.
- (b) Reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation. Evidence to support this should include, inter alia, contracts with consultants for CDM/PDD/methodology services, Emission Reduction Purchase

²² See document currently located at <http://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf>.

²³ See EB 49 report, paragraph 47, currently located at <<http://cdm.unfccc.int/EB/049/eb49rep.pdf>>, and its annex 22, “Guidelines on the demonstration and assessment or prior consideration of the CDM”, currently located at <http://cdm.unfccc.int/EB/049/eb49_repan22.pdf> for the guidelines.

²⁴ See EB 48, annex 62, “Prior consideration of the CDM form”, currently located at <http://cdm.unfccc.int/EB/048/eb48_repan62.pdf>, for the standardized form.



Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds), evidence of agreements or negotiations with a DOE for validation services, submission of a new methodology to the CDM Executive Board, publication in newspaper, interviews with DNA, earlier correspondence on the project with the DNA or the UNFCCC secretariat.

103. If evidence to support the serious prior consideration of the CDM as indicated above is not available the DOE shall determine that the CDM was not considered in the decision to implement the project activity.

(iii) Reporting requirements

104. The validation report shall:

- (a) Describe the DOE's validation of the project activity start date provided in the PDD;
- (b) Describe the evidence for prior consideration of the CDM (if necessary) that was assessed;
- (c) Provide a clear validation opinion regarding whether the proposed CDM project activity complies with the requirements of the latest version of the Guidance on prior consideration of CDM.

(b) Identification of alternatives

(i) Requirement to be validated

105. The PDD shall identify credible alternatives to the project activity in order to determine the most realistic baseline scenario, unless the approved methodology that is selected by the proposed CDM project activity prescribes the baseline scenario and no further analysis is required.

(ii) Means of validation

106. The DOE shall assess the list of alternatives given in the PDD and ensure that:

- (a) The list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity;
- (b) The list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity;
- (c) The alternatives comply with all applicable and enforced legislation.

(iii) Reporting requirements

107. The validation report shall describe whether the DOE considers the listed alternatives to be credible and complete.

(c) Investment analysis(i) Requirement to be validated

108. If investment analysis has been used to demonstrate the additionality of the proposed CDM project activity, the PDD shall provide evidence that the proposed CDM project activity would not be:

- (a) The most economically or financially attractive alternative; or
- (b) Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs).

109. Project participants can show this through one of the following approaches, by demonstrating that:²⁵

- (a) The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity;
- (b) The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative;
- (c) The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.

110. The DOE shall comply with the latest version of the “Guidance on the Assessment of Investment Analysis” as provided by the CDM Executive Board and with other relevant guidance including the latest guidelines on plant load factors “guidelines for the reporting and validation of plant load factors”.²⁶

(ii) Means of validation

111. To verify the accuracy of financial calculations carried out for any investment analysis, the DOE shall:

- (a) Conduct a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices;
- (b) Cross-check the parameters against third-party or publicly available sources, such as invoices or price indices;
- (c) Review feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants;

²⁵ It should be noted that the EB 51 report, ~~annex 35~~, paragraph 77, currently located at <http://cdm.unfccc.int/EB/051/eb51rep.pdf> and its annex 58 “Guidance on the assessment of investment analysis”, currently located at http://cdm.unfccc.int/EB/051/eb51_repan58.pdf http://cdm.unfccc.int/EB/039/eb39_repan35.pdf and the requirements of specific methodologies may preclude the use of one of these options in certain scenarios.

²⁶ See EB 48 report, ~~annex 11~~, currently located at http://cdm.unfccc.int/EB/048/eb48_repan11.pdf.



- (d) Assess the correctness of computations carried out and documented by the project participants;
- (e) Assess the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions.
112. To confirm the suitability of any benchmark applied in the investment analysis, the DOE shall:²⁷
- (a) Determine whether the type of benchmark applied is suitable for the type of financial indicator presented;
- (b) Ensure that any risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity;
- (c) Determine whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants involved and determining whether the same benchmark has been applied or if there are verifiable circumstances that have led to a change in the benchmark.
113. The CDM Executive Board clarified that in cases where project participants rely on values from Feasibility Study Reports (FSR)²⁸ that are approved by national authorities for proposed CDM project activities, DOEs are required to ensure that:
- (a) The FSR has been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed;
- (b) The values used in the PDD and associated annexes are fully consistent with the FSR, and where inconsistencies occur the DOE should validate the appropriateness of the values;
- (c) On the basis of its specific local and sectoral expertise, confirmation is provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision.
- (iii) Reporting requirements
114. The validation report shall:
- (a) Describe in detail how the parameters used in any financial calculations have been validated;
- (b) Describe how the suitability of any benchmark applied has been assessed;

²⁷ See EB 51 report, paragraph 78, currently located at <<http://cdm.unfccc.int/EB/051/eb51rep.pdf>>, and its annex 59 “Previous rulings related to the appropriateness of benchmarks for project activities utilizing waste heat/waste gas for power generation”, currently located at <http://cdm.unfccc.int/EB/051/eb51_repan59.pdf> for further information.

²⁸ See EB 238 report, paragraph 54, currently located at <<http://cdm.unfccc.int/EB/0238/eb238rep.pdf>>.



- (c) Confirm whether the underlying assumptions are appropriate and the financial calculations are correct.
- (d) Barrier analysis²⁹
 - (i) Requirement to be validated

115. If barrier analysis has been used to demonstrate the additionality of the proposed CDM project activity, the PDD shall demonstrate that the proposed CDM project activity faces barriers that:

- (a) Prevent the implementation of this type of proposed CDM project activity³⁰;
- (b) Do not prevent the implementation of at least one of the alternatives.
- (ii) Means of validation

116. Issues that have a clear direct impact³¹ on the financial returns of the project activity cannot be considered barriers and shall be assessed by investment analysis. This does not refer to either:

- (a) Risk related barriers, for example risk of technical failure, that could have negative effects on financial performance; or
- (b) Barriers related to the unavailability of sources of finance for the project activity.

117. The DOE shall apply a two-step process to assessing the barrier analysis performed, as follows:

- (a) *Determine whether the barriers are real.* The DOE shall assess the available evidence and/or undertake interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist. The DOE shall ensure that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics. If existence of a barrier is substantiated only by the opinions of the project participants, the DOE shall not consider this barrier to be adequately substantiated. If the DOE considers, on the basis of its sectoral or local expertise, that a barrier is not real or is not supported by sufficient evidence, it shall raise a CAR to have reference to this barrier removed from the project documentation;
- (b) *Determine whether the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives.* Since not all barriers present an insurmountable hurdle to a project activity being implemented, the DOE shall apply its local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the proposed CDM project activity and would not equally

²⁹ Barriers are issues in project implementation that could prevent a potential investor from pursuing the implementation of the proposed project activity. The identified barriers are only sufficient grounds for demonstration of additionality if they would prevent potential project proponents from carrying out the proposed project activity undertaken without being registered as a CDM project activity.

³⁰ See EB 50, annex 13, “guidelines for objective demonstration and assessment of barriers”, currently located at <http://cdm.unfccc.int/EB/050/eb50_repan13.pdf>.

³¹ Defined in this context as those issues whose impacts can be expressed in monetary terms with reasonable certainty.



prevent implementation of *at least one of* the possible alternatives, in particular the identified baseline scenario.

(iii) Reporting requirements

118. The validation report shall:

- (a) Provide an assessment of each barrier listed in the PDD, which describes how the DOE has undertaken validation of the barrier;
- (b) Provide an overall determination of the credibility of the barrier analysis performed.

(e) Common practice analysis

(i) Requirement to be validated

119. For proposed large-scale CDM project activities, unless the proposed project type is first-of-its kind, common practice analysis shall be carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality. This is a test to complement the investment analysis (Step 2 of the additionality tool) or barrier analysis (Step 3 of the additionality tool) to confirm that the project activity is not widely observed and commonly carried out in the region.

(ii) Means of validation

120. The DOE shall use its local and sectoral expertise to:

- (a) Assess whether the geographical scope (e.g. the defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type. For certain technologies the relevant region for assessment will be local and for others it may be transnational/global. If a region other than the entire host country is chosen, the DOE shall assess the explanation why this region is more appropriate;
- (b) Using official sources and local and industry expertise, determine to what extent similar and operational projects (e.g. using similar technology or practice), other than CDM project activities, have been undertaken in the defined region;
- (c) If similar and operational projects, other than CDM project activities, are already "widely observed and commonly carried out" in the defined region, assess whether there are essential distinctions between the proposed CDM project activity and the other similar activities.

(iii) Reporting requirements

121. The validation report shall provide details regarding:

- (a) How the geographical scope of the common practice analysis has been validated;
- (b) How the DOE has undertaken an assessment of the existence of similar projects;
- (c) How the DOE has assessed the essential distinctions between the proposed CDM project activity and any similar projects that are widely observed and commonly carried out;



- (d) Confirmation by the DOE that the proposed CDM project activity is not common practice.

7. Monitoring plan

- (i) Requirement to be validated

122. The PDD shall include a monitoring plan. This monitoring plan shall be based on the approved monitoring methodology applied to the proposed CDM project activity.

- (ii) Means of validation

123. The DOE shall apply a two-step process to assessing compliance with this requirement, as follows:

- (a) *Compliance of the monitoring plan with the approved methodology.* The DOE shall:
 - (i) By means of document review, identify the list of parameters required by the selected approved methodology;
 - (ii) Confirm that the monitoring plan contains all necessary parameters, that they are clearly described and that the means of monitoring described in the plan complies with the requirements of the methodology.
- (b) *Implementation of the plan.* The DOE shall, by means of review of the documented procedures, interviews with relevant personnel, project plans and any physical inspection of the proposed CDM project activity site in accordance with paragraphs 59–62, assess whether:
 - (i) The monitoring arrangements described in the monitoring plan are feasible within the project design;
 - (ii) The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified.
- (iii) Reporting requirements

124. The validation report shall:

- (a) State the DOE's opinion of the compliance of the monitoring plan with the requirements of the methodology;
- (b) Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design;
- (c) State the DOE's opinion of the project participants ability to implement the monitoring plan.



8. Sustainable development

(i) Requirement to be validated

125. CDM project activities shall assist Parties not included in Annex I to the Convention in achieving sustainable development.

(ii) Means of validation

126. The DOE shall determine whether the letter of approval by the DNA of the host Party confirms the contribution of the proposed CDM project activity to the sustainable development of the host Party.

(iii) Reporting requirements

127. The validation report shall state whether the host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. This may be reported together with the DOE's assessment of the validity of the host Party's approval (refer to paragraphs 49 and 50 above).

9. Local stakeholder consultation

(i) Requirement to be validated

128. Local stakeholders³² shall be invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website.

(ii) Means of validation

129. The DOE shall, by means of document review and interviews with local stakeholders as appropriate, determine whether:

- (a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;
- (b) The summary of the comments received as provided in the PDD is complete;
- (c) The project participants have taken due account of any comments received and have described this process in the PDD.

(iii) Reporting requirements

130. The validation report shall:

- (a) Describe the steps taken to assess the adequacy of the local stakeholder consultation;
- (b) State the DOE's opinion on the adequacy of the local stakeholder consultation.

10. Environmental impacts

(i) Requirement to be validated

131. Project participants shall submit documentation to the DOE on the analysis of the environmental impacts of the project activity in accordance with paragraph 37(c) of the CDM modalities and procedures.

³² See glossary of CDM terms, currently located at http://cdm.unfccc.int/Reference/Guidclarif/glos_CDM_v03.pdf, for definition of stakeholders.



(ii) Means of validation

132. The DOE shall confirm, by means of a document review and/or using local official sources and expertise, whether the project participants have undertaken an analysis of environmental impacts and, if required by the host Party, an environmental impact assessment.

(iii) Reporting requirements

133. The validation report shall describe whether the project participants have undertaken an analysis of environmental impacts and, if required by the host Party, an environmental impact assessment in accordance with procedures as required by the host Party.

F. Specific validation activities

1. Background

134. Project participants may contract a DOE to undertake certain specific validation activities. For such validation activities, the DOE shall apply the general means of validation and reporting requirements described above as well as those described below.

2. Project design of small-scale clean development mechanism project activities

135. The DOE shall determine whether a proposed small-scale CDM project activity meets the requirements of the simplified modalities and procedures for small-scale CDM project activities.³³

136. During its validation of a small-scale project activity, the DOE shall confirm that:

- (a) The project activity qualifies within the thresholds of the three possible types of small-scale project activities. It may include more than one component; for example, a type III methane recovery component activity and a type I electricity component activity;³⁴
- (b) The project activity conforms to one of the approved small-scale categories³⁵ and applies the relevant tool or methodology. The DOE shall confirm that the small-scale methodologies are applied in conjunction with the general **guidelines annex to the SSC CDM methodologies**^{36 37}, which provides **guidelines annex** on equipment capacity,

³³ See decision 4/CMP.1, annex II.

³⁴ See EB 28 report, paragraphs 56 and 57, currently located at <<http://cdm.unfccc.int/EB/028/eb28rep.pdf>> for guidance on size limits for the components.

³⁵ Small-scale project activities that follow the simplified modalities and procedures for small-scale CDM project activities may not apply a large-scale approved methodology. However, a project activity that is within the small-scale project activity thresholds may apply a large-scale approved methodology if it follows the modalities and procedures for large-scale project activities defined in footnote 1 above.

³⁶ See EB 54 report, paragraph 37, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>> and its annex 14 “General guidelines to SSC methodologies”, currently located at <<http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>>. The latest versions are located at <http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid06.pdf> for further clarification. In the EB 44 report, paragraph 49, currently located at <<http://cdm.unfccc.int/EB/044/eb44rep.pdf>>, Board clarified that the header of SSC methodologies stating “Project participants shall take into account the general guidance to the methodologies, information on additionality, abbreviations and general guidance on leakage provided at the same link mentioned above”, which also implies attachment C of appendix B.

equipment performance/lifetime, baseline identification for type-II/III Greenfield project activities, sampling and other monitoring-related issues;³⁸

- (c) The project activity is not a debundled component of a large-scale project, in accordance with the rules defined in appendix C of the simplified modalities and procedures for small-scale CDM project activities;³⁹
- (d) Whether an assessment of the environmental impacts of the proposed CDM project activity is required by the host Party.

137. In assessing the additionality of small scale CDM project activities, the DOE shall refer to the specific requirements on demonstration of additionality for small scale project activities^{40 41} together with the guidance in chapter V, section E, subsection 6⁴² and may refer to the “Non-binding best practice examples to demonstrate additionality for SSC project activities”.⁴³

~~<http://cdm.unfccc.int/methodologies/SSCmethodologies/history/c_leak_biomass/guid_biomass_v03.pdf> is to be applied in conjunction with a SSC methodology *mutatis mutandis*.~~

³⁷ In the EB 44 report, paragraph 49, currently located at <<http://cdm.unfccc.int/EB/044/eb44rep.pdf>>, Board clarified that the header of SSC methodologies stating “Project participants shall take into account the general guidance to the methodologies, information on additionality, abbreviations and general guidance on leakage provided at the same link mentioned above”, which also implies attachment C of appendix B <http://cdm.unfccc.int/methodologies/SSCmethodologies/history/c_leak_biomass/guid_biomass_v03.pdf> is to be applied in conjunction with a SSC methodology *mutatis mutandis*.

³⁸ See EB 50 report, paragraph 51 and its annex 30, “General guidelines for sampling and surveys for small-scale CDM project activities”, currently located at <http://cdm.unfccc.int/EB/050/eb50_repan30.pdf> for sampling guidance. In accordance with the EB 44 report, paragraph 50, currently located at <<http://cdm.unfccc.int/EB/044/eb44rep.pdf>>, leakage from equipment transfer from within to outside the project boundary may be excluded from consideration in SSC methodologies.

³⁹ See EB 54 report, paragraph 36, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>> and its⁴⁷ annex 1332 “Guidelines on assessment of de-bundling for SSC project activities”, currently located at <http://cdm.unfccc.int/EB/047/eb47_repan32.pdf> <http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid17.pdf> for guidance, and the EB 46 report, paragraph 60, currently located at <<http://cdm.unfccc.int/EB/046/eb46rep.pdf>> for further clarification on determining the occurrence of debundling do not require the consideration of the start date of the proposed CDM project.

⁴⁰ See decision 3/CMP.1, annex, appendix B, a Attachment A to Appendix B of 4/CMP.1, annex II, currently located at <http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid05.pdf>. for small scale CDM project activities.

⁴¹ For assessing additionality in the case of small scale renewable energy projects less than or equal to 5 MW and energy efficiency projects with energy saving less than or equal to 20 GWH per year, see EB 54 report, paragraph 38, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>> and its annex 15 “Guidelines for demonstrating additionality of renewable energy projects =< 5 MW and energy efficiency projects with energy savings <= 20 GWH per year”, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/VK80BI3SAU4ROHX7MTN1LQ2DPJ5GZE>> for further clarification.

⁴² See decision 3/CMP.1, annex, appendix B, attachment A for small scale CDM project activities.

⁴³ See EB35, annex 34, currently located at <http://cdm.unfccc.int/EB/035/eb35_repan34.pdf>.



3. Afforestation or reforestation project activities under the clean development mechanism

(a) General requirement

138. The guidance provided in chapter V, section E above also applies to the validation of A/R CDM project activities to the extent defined in modalities and procedures for afforestation ~~and~~ reforestation (A/R) CDM project activities⁴⁴ and relevant guidance by the CDM Executive Board.^{45 46}

139. In addition the DOE shall confirm that that specific requirements as defined in the modalities and procedures for A/R CDM project activities have been followed, including:

- (a) Project boundary for A/R CDM project activities;
- (b) Selection of carbon pools;
- (c) Eligibility of land;
- (d) Approach proposed to address non permanence;
- (e) Timing of management activities, including harvesting cycles, and verifications;
- (f) Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems.

(b) Project boundary for A/R CDM project activities

(i) Requirement to be validated

140. The PDD shall contain a description of the project boundary that geographically delineates the proposed afforestation or reforestation CDM project activity under the control of the project participants. The proposed A/R CDM project activity may contain more than one discrete area of land.

(ii) Means of validation

141. The DOE shall confirm whether the PDD contains a description of the CDM project boundary that encircles discrete areas of land planned for the proposed afforestation or reforestation CDM project activity under the control of the project participants.

⁴⁴ See decision 5/CMP.1, annex.

⁴⁵ The CDM Executive Board clarified that for project activities that have both A/R and non-A/R components, in order to avoid double counting of emission sources, the emissions associated with A/R activity shall be accounted for and clearly documented by the A/R CDM project activity (see EB 38 report, paragraph 28, currently located at <<http://cdm.unfccc.int/EB/038/eb38rep.pdf>>); In accordance with the EB 42 report, paragraph 35, currently located at <<http://cdm.unfccc.int/EB/042/eb42rep.pdf>>, and the EB 44 report, paragraph 37, currently located at <<http://cdm.unfccc.int/EB/044/eb44rep.pdf>>, the following sources related to A/R CDM proposed project activities are insignificant in A/R CDM proposed project activities and may therefore be neglected in A/R baseline and monitoring methodologies: (a) Fertilizer application; (b) Removal of herbaceous vegetation; (c) Transportation; (d) Fossil fuel combustion in A/R CDM project activities; (e) Collection of wood from non-renewable sources to be used for fencing of the project area; and (f) Nitrous oxide (N₂O) emissions from decomposition of litter and fine roots from N-fixing trees.

⁴⁶ See EB 53 report, paragraphs 41 and 42 and its annex 13 “Procedure for the submission and consideration of a proposed new A/R baseline and monitoring methodology for A/R CDM project activities”, currently located at <http://cdm.unfccc.int/EB/053/eb53_repan13.pdf>.



142. The DOE shall, through document review and/or interviews, validate that the project participants ~~have~~ for all areas of land planned for A/R CDM project activity:

- (a) ~~Have already established~~ the control over afforestation or reforestation ~~activities is already established;~~ or
- (b) ~~The control over afforestation or reforestation~~ is expected to be established in accordance to the guidance specified in the EB 44 report, annex 16.⁴⁷

The control has to include at minimum the exclusive right, defined in a way acceptable under the legal system of the host country, to perform the A/R activity with the aim of achieving net anthropogenic GHG removals by sinks. If the total number of documents to be reviewed and persons/entities to be interviewed is not less than ten, then the DOE may apply a sampling approach.

(iii) Reporting requirements

143. In the validation report, the DOE shall describe the documentation assessed and/or oral statements delivered by persons interviewed (if any) and conclude on their acceptability under the legal system of the host country. In a case the DOE has applied a sampling approach, the validation report shall additionally describe how many sites have been assessed and how these were selected.

(c) Selection of carbon pools

(i) Requirement to be validated

144. Proposed A/R CDM project activity may account for verifiable changes in the following carbon pools within the project boundary: above-ground biomass, below-ground biomass, litter, dead wood, and soil organic carbon⁴⁸.

(ii) Means of validation

145. The DOE shall determine whether the PDD selected the carbon pools to be considered in the proposed A/R CDM project activity in accordance with the requirements of the selected approved methodology. If the approved methodology allows for an option to exclude certain carbon pools, the DOE shall confirm that verifiable information has been provided to justify the ~~exclusion~~selection. For this, the DOE shall ensure that all documents referred to in the PDD are correctly quoted and interpreted. If relevant, the DOE shall cross check the information provided in the PDD with other available information from public sources or local experts.

(iii) Reporting requirements

146. In the validation report, the DOE shall provide a statement whether the selection of carbon pools complies with the applied approved methodology, and if the methodology allows for the option to exclude certain pools and the option is selected by PPs, whether the exclusion is justified for the project activity.

⁴⁷ See the document currently located at <http://cdm.unfccc.int/EB/044/eb44_repan16.pdf>.

⁴⁸ See decision 5/CMP.1, annex, paragraph 1(a).

(d) Eligibility of land(i) Requirement to be validated

147. Project participants shall provide evidence that the land within the planned project boundary is eligible for a proposed A/R CDM project activity following the most recent version of the “Procedures to demonstrate the eligibility of land for A/R CDM project activities”⁴⁹.

(ii) Means of validation

148. The DOE shall validate, based on review of information that reliably discriminates between forest and non-forest land according to the particular thresholds adopted by the host country (exemplary sources are listed in the abovementioned procedures) and a site visit, that the area of land included within the project boundary is eligible for afforestation or reforestation activity.

(iii) Reporting requirements

149. In the validation report, the DOE shall describe how the validation of the eligibility of the land has been performed, by detailing the data sources assessed and by describing its observations during a site visit process. The DOE shall provide a statement whether the entire land within the project boundary is eligible for a proposed A/R CDM project activity.

(e) Conservative choice and application of default data(i) Requirement to be validated

150. Project participants shall ensure that application of default data in estimation of the net anthropogenic GHG removals by sinks results in conservative, but not overly conservative, estimates. An acceptable method for satisfying the above-mentioned requirement is provided in the most recent version of the “Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks”.⁵⁰

(ii) Means of validation

151. The DOE shall review the PDD to ensure satisfactory application of “Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks” in order to prevent any overestimation of reductions in anthropogenic emissions according to the provisions of the modalities and procedures for afforestation ~~and~~ reforestation CDM project activities.

(iii) Reporting requirements

152. In the validation report, the DOE shall describe how the default data were selected and applied. The DOE shall provide a statement whether the use of the default data avoids any overestimation of the net anthropogenic GHG removals by sinks.

⁴⁹ See EB 38 report, paragraph 28, currently located at <<http://cdm.unfccc.int/EB/038/eb38rep.pdf>>.

⁵⁰ See EB 46 report, paragraphs 45 and 47, currently located at <<http://cdm.unfccc.int/EB/046/eb46rep.pdf>> and EB 50 report, paragraph 41, currently located at <<http://cdm.unfccc.int/EB/050/eb50rep.pdf>> for more guidance on carbon stocks and biomass stocks.



(f) Approach proposed to address non-permanence

(i) Requirement to be validated

153. Project participants shall specify the approach **selected proposed** to address non-permanence in accordance with paragraph 38 of the modalities and procedures for afforestation **and/or** reforestation CDM project activities.

(ii) Means of validation

154. The DOE shall review the PDD to ensure an approach to address non-permanence is selected according to the provisions of the modalities and procedures for afforestation **and/or** reforestation CDM project activities.

(iii) Reporting requirements

155. The validation report shall describe the approach **selected proposed** by the project participants to address non-permanence.

(g) Timing of management activities, including harvesting cycles, and verifications

(i) Requirement to be validated

156. Project participants shall plan management activities, including harvesting cycles, and verifications such that a systematic coincidence of verification and peaks in carbon stocks would be avoided.

(ii) Means of validation

157. The DOE shall review the forest management plan and the monitoring plan for the proposed A/R CDM project activity to ensure that a systematic coincidence of verification and peaks in carbon stocks is avoided.

(iii) Reporting requirements

158. The validation report shall describe how the project participants have ensured that a systematic coincidence of verification and peaks in carbon stocks would be avoided.

(h) Socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems

(i) Requirement to be validated

159. Project participants shall submit to the DOE documentation on their analysis of the socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary of the proposed afforestation or reforestation project activity under the CDM.⁵¹

⁵¹ In accordance with decision 5/CMP.1, annex, paragraph 12 (c), if any negative impact is considered significant by the project participants or the host Party, project participants shall undertake a socio-economic impact assessment and/or an environmental impact assessment in accordance with the procedures required by the host Party.

(ii) Means of validation

160. The DOE shall confirm, by means of a document review and/or using local official sources and expertise, ~~that whether~~ the project participants have undertaken an analysis of the socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary.

161. Should the above-mentioned analysis lead to conclusion that any negative impact that may be considered significant by the project participants or the host Party was detected then the DOE shall, by means of document review, ~~ascertain ensure~~ that a socio-economic impact assessment and/or an environmental impact assessment has been ~~undertaken conducted~~ in accordance with relevant host Party regulations and the outcome ~~of such impact assessment is accurately~~ summarized in the PDD. ~~The DOE shall also ascertain that a description of the planned monitoring and remedial measures to address the negative impacts has been included in the PDD.~~

(iii) Reporting requirements

162. The validation report shall describe whether the project participants have undertaken an analysis of the socio-economic and environmental impacts and, if required by the host Party ~~in view of paragraph 161 above, a the~~ socio-economic ~~impact assessment~~ and/or an environmental impact assessment in accordance with relevant host Party regulations. ~~The validation report shall also mention whether the outcome of such impact assessment has been summarized in the PDD and a description of the planned monitoring and remedial measures to address the negative impacts has been included in the PDD.~~

4. Project design of small-scale afforestation or reforestation project activities

163. Small-scale afforestation or reforestation CDM project activities shall be validated using the requirements for afforestation or reforestation CDM project activities as described in section 3 above while taking into account the simplified modalities and procedures for small-scale afforestation and reforestation CDM project activities.⁵²

164. During its validation of a proposed small-scale A/R CDM project activity the DOE shall determine whether:

- (a) The project activity ~~qualifies as a proposed small-scale A/R CDM project activity and complies with the thresholds for the proposed small-scale A/R CDM project activities;~~
- (b) The project activity complies with one of the types of small-scale A/R project activities defined in appendix B of the annex to decision 6/CMP.1 ~~and. It qualifies to apply one of the approved a simplified baseline and monitoring methodology for this small-scale afforestation and reforestation project activities type and the methodology has been applied correctly;~~
- (c) The proposed CDM project activity is not a part of a debundled large-scale A/R project activity, in accordance with the rules defined in appendix C of the annex to decision 6/CMP.1;
- (d) The proposed CDM project activity has been developed or implemented by low-income communities and individuals as confirmed by the host Party.

⁵² See decision 6/CMP.1, annex.



5. Programme of activities

165. The CDM Executive Board has provided guidance and procedures for registering a programme of activities (PoA) as a single CDM project activity⁵³. In validating a PoA and any CDM programme activities (CPAs) proposed to be included in the PoA, the DOE shall, in general, apply the means of validation and reporting requirements described in this Manual. However there are a number of requirements unique to PoAs for which additional instructions are provided below, the precise extent of validation required in each of these areas will need to be determined by the DOE based on the type or PoA being validated.⁵⁴

(a) Operational and management arrangements for the PoA

166. The DOE shall assess the operational and management arrangements which have been established by the coordinating/managing entity in order to determine whether these arrangements are suitable for the PoA being validated. The arrangements shall be sufficient to ensure that the coordinating/managing entity will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme. Where the DOE considers the arrangements to be unsatisfactory or insufficient a CAR shall be raised and a request for registration shall not be submitted until the CAR has been resolved to the satisfaction of the DOE.

(b) Eligibility criteria for CPAs

167. The DOE shall assess the specified eligibility criteria in the POA-DD in order to determine whether or not these criteria are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA, these requirements will include inter alia the means of demonstrating the additionality of the CPA and the applicability of the applied methodology. The eligibility criteria represent an essential element of ensuring the smooth functioning or programmatic CDM, therefore the DOE may raise CARs which ensure the ease of application of the eligibility criteria.

(c) Validation of CPAs

168. The DOE shall assess any proposed CPA, which a coordinating/managing entity wishes to include in the PoA, to determine whether or not it complies with the eligibility criteria specified in the POA-DD. The means of validation to determine compliance with this requirement will be specific to the PoA. The DOE may consider a desk review of the documentation sufficient to determine compliance in certain instances and may also consider follow-up interviews and/or site visits necessary for other types of PoA.

6. Renewal of crediting period

169. When contracted to validate a proposed CDM project activity for a second or further crediting period, the DOE shall undertake a thorough reassessment of the validity of the original baseline or any updates thereto proposed by the project participants, and the corresponding estimation of emission reductions for the applicable crediting period, based on the latest version of the procedures for renewing

⁵³ See EB 47 report, paragraphs 70 and 72, currently located at <<http://cdm.unfccc.int/EB/047/eb47rep.pdf>>, for revised guidance and procedures on programmes of activities.

⁵⁴ See EB 53 report, paragraph 40, currently located at <http://cdm.unfccc.int/EB/053/eb53_rep.pdf> for further information.



the crediting period,⁵⁵ the latest applicable version of approved methodology and the means of validation described in this Manual.

7. Changes to the start date of the crediting period

170. The CDM Executive Board has provided revised procedures for requesting post-registration changes to the start date of the crediting period in which the requirement for the Host Country to re-confirm that the delay in the start date of crediting period will not affect project's contribution to sustainable development has been removed and these revised procedures also contain provisions for project activities hosted in Least Developed Countries (LDCs).⁵⁶ If project participants wish to delay the start date of the crediting period by more than one year but less than two years, and if project participants of projects hosted by a LDC wish to delay the start date of the crediting period by more than two year but less than four years, the DOE shall validate the baseline scenario in accordance with chapter V, section E, subsection 5(d) above.

171. The validation report shall contain a description of the progress made in project implementation. Further, the DOE shall validate that the project participants have obtained written confirmation from the host Party that the delay will not alter the project's contribution to sustainable development.

G. Validation report

172. The validation report shall include the DOE's final validation opinion (see paragraphs 175–176 below).

173. The report shall:

- (a) State the DOE's conclusions regarding the proposed CDM project activity's conformity with applicable CDM requirements;
- (b) Give an overview of the validation activities carried out by the DOE in order to arrive at the final validation conclusions and opinion, including a general discussion of details captured by the validation protocol and conclusions related to CDM requirements;
- (c) Reflect the results of the dialogue between the DOE and the project participants, as well as any adjustments made to the project design following stakeholder consultation. It shall reflect the responses to CARs and CLs, and discussions on and revisions to project documentation.

174. The validation report shall provide at least the following:

- (a) A summary of the validation process and its conclusions;
- (b) All the DOE's applied approaches, "findings and conclusions, especially on: baseline selection, additionality, emission factors and monitoring",⁵⁷

⁵⁵ See EB 46 report, annex 11 "Procedures for renewal of the crediting period of a registered CDM project activity", the document currently located at <http://cdm.unfccc.int/Reference/Procedures/reg_proc04.pdf>.

⁵⁶ See EB 5224 report, annex 5931 "Procedures for requesting post-registration changes to the start date of the crediting period" version 02, currently located at <http://cdm.unfccc.int/EB/052/eb52_repan59.pdf> <http://cdm.unfccc.int/EB/024/eb24_repan31.pdf>.

⁵⁷ See the document "Procedures for processing and reporting on validation of CDM project activities" currently located at <http://cdm.unfccc.int/Reference/Procedures/valid_proc02.pdf>.

- (c) Information on the global stakeholders consultation carried out by the DOE prior to submitting the project for validation, including dates and how comments received have been taken into consideration by the DOE;
- (d) A list of interviewees and documents reviewed;
- (e) Details of the validation team;
- (f) Information on quality control within the team/of the validation process;
- (g) Appointment certificates or curricula vitae of the DOE's validation team members.

H. Validation opinion

175. The DOE shall provide either:
- (a) A positive validation opinion in its validation report that is submitted as a request for registration;⁵⁸ or
 - (b) A negative validation opinion in its validation report explaining the reason for its opinion if the DOE determines that the proposed CDM project activity does not fulfil applicable CDM requirements. If such negative opinion is issued prior to the submission of the request for registration of the project activity, in accordance with paragraph 40 (e) (ii) of the CDM Modalities and Procedures the DOE shall provide this validation report to the project participants, and in accordance with paragraph 18 of the “Procedures for processing and reporting on validation of CDM project activities” (EB 50, annex 48) the DOE shall notify the CDM Executive Board that such a validation report has been issued. If the negative opinion is issued after the request for registration of the project activity has been submitted by the DOE to the Board, the DOE may request for the withdrawal of the request for registration in accordance with the “Procedures for withdrawal of a request for registration”.⁵⁹
176. The opinion shall include at least the following:
- (a) A summary of the validation methodology and process used and the validation criteria applied;
 - (b) A description of project components or issues not covered by the validation process;
 - (c) A summary of the validation conclusions;
 - (d) A statement on the validation of the expected emission reductions;

⁵⁸ See EB 54 report, paragraph 57, currently located at <https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>, and its annex 28 “Procedures for requests for registration of proposed CDM project activities”, currently located at <https://cdm.unfccc.int/UserManagement/FileStorage/A9MIDXRO63V1YGCWTBSJP05H2LQEF4> for submission and consideration procedures.

⁵⁹ See EB 54 report, paragraph 55, currently located at <https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>, and its annex 27, “Procedures for withdrawal of a request for registration”, currently located at <https://cdm.unfccc.int/UserManagement/FileStorage/AR8DSMP0JOETFN9L34X56IHYC7WGV2>.



- (e) A statement whether the proposed CDM project activity meets the stated criteria.

VI. CDM Verification requirements based on paragraph 62 of the CDM modalities and procedures

A. Objective of verification

177. In carrying out its verification work, the DOE shall ensure that the project activity complies with the requirements of paragraph 62 of the CDM modalities and procedures.

178. Based on the applicable requirements of paragraph 62 of the CDM modalities and procedures, this assessment shall:

- (a) Ensure that the project activity has been implemented and operated as per the registered PDD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- (b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs⁶⁰ and verifiable and in accordance with applicable CDM requirements. The CDM Executive Board provided a standardized format for monitoring report to improve consistency in reporting of the implementation and monitoring of the project activity by project participants;⁶¹
- (c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology;
- (d) Evaluate the data recorded and stored as per the monitoring methodology.

B. Verification approach

179. The DOE shall assess and verify that the implementation of the project activity and the steps taken to report emission reductions comply with the CDM criteria and relevant guidance provided by the CMP and the CDM Executive Board.

180. This assessment shall involve a review of relevant documentation as well as an on-site visit(s) in accordance with paragraphs 59–62 above. The information to be verified is described in paragraph 1824 below.

181. The DOE's verification of the project documentation provided by the project participant shall be based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the monitoring report submitted to the DOE. Qualitative

⁶⁰ See EB 54 report, paragraph 73, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>>, and its annex 35 "Procedures for requests of issuance of CERs", currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/L5E0MV6ADB3X491YJUPN7FQGHSR2WC>> for process of the consideration of requests for issuance.

⁶¹ For details see EB 54 report, paragraph 71, currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/JFZ3XEVTQP4S2AH5OMD8RL19WBU60Y>> and its annex 34 "Guidelines for completing the monitoring report from (CDM-MR)", currently located at <<https://cdm.unfccc.int/UserManagement/FileStorage/WT31XF9KVUPEMY5IAZC2LHJSNOGR8D>>.



information comprises information on internal management controls, calculation procedures, procedures for transfer of data, frequency of emissions reports, and review and internal audit of calculations.

182. In addition to the monitoring documentation provided by the project participants, the DOE shall review:

- (a) The registered PDD, including the monitoring plan and the corresponding validation report;
- (b) Previous verification reports, if any;
- (c) The applied monitoring methodology;
- (d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board;
- (e) Any other information and references relevant to the project activity's resulting emission reductions (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).

183. In addition to reviewing the monitoring documentation, the DOE shall confirm that the project participants have addressed FARs identified during validation.

C. Verification methods

1. Means of verification

184. The DOE shall apply standard auditing techniques to assess the quality of the information, including but not limited to:

- (a) Desk review, involving:
 - (i) A review of the data and information presented to verify their completeness;
 - (ii) A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;⁶²
 - (iii) An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.
- (b) On-site assessment, involving:
 - (i) An assessment of the implementation and operation of the proposed CDM project activity as per the registered PDD;
 - (ii) A review of information flows for generating, aggregating and reporting the monitoring parameters;

⁶² See EB 52 report, annex 60 "Guidelines for assessing compliance with the calibration frequency requirements", currently located at <https://cdm.unfccc.int/EB/052/eb52_repan60.pdf> for details.



- (iii) Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the PDD;
- (iv) A cross-check between information provided in the monitoring report and data from other sources such as plant log books, inventories, purchase records or similar data sources;
- (v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD and the selected methodology;
- (vi) A review of calculations and assumptions made in determining the GHG data and emission reductions;
- (vii) An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

2. Quality of evidence

185. When verifying the reported emission reductions, the DOE shall ensure that there is a clear audit trail that contains the evidence and records that validate or invalidate the stated figures. It shall include the source documents that form the basis for assumptions and other information underlying the GHG data.

186. Matters to address when assessing the audit trail include:

- (a) Whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period;
- (b) The source and nature of the evidence (external or internal, oral or documented, etc.);
- (c) If comparable information is available from sources other than that used in the monitoring report, then the DOE shall cross check the monitoring report against the other sources to confirm that the stated figures are correct.

187. The DOE shall assess that the data collection system meets the requirements of the monitoring plan as per the applied methodology.

188. The DOE shall only certify emission reductions that are based upon verifiable evidence.

3. Clarification requests, corrective action requests and forward action requests

189. The DOE, during its verification, shall identify issues related to the monitoring, implementation or operations of the proposed CDM project activity that could impair the capacity of the proposed CDM project activity to achieve emission reductions or influence the reporting of emission reductions. The DOE shall identify, discuss and conclude these issues in the verification report.

190. The DOE shall raise a CAR if one of the following occurs:

- (a) Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;



- (b) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- (c) Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

191. The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

192. All CARs and CLs raised by the DOE during verification shall be resolved prior to submitting a request for issuance.

193. The DOE shall raise a FAR during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

194. The DOE shall report on all CARs, CLs and FARs in its verification report. This reporting shall be undertaken in a transparent manner that allows the reader to understand the nature of the issue raised, the nature of the responses provided by the project participants, the means of verification of such responses and clear references to any resulting changes in the monitoring report or supporting annexes.

D. Verification of specific requirements

1. Project implementation in accordance with the registered project design document

(i) Requirement to be verified

195. The DOE shall identify any concerns related to the conformity of the actual project activity and its operation with the registered project design document.⁶³

(ii) Means of verification

196. The DOE shall, by means of an on-site visit, assess that all physical features of the proposed CDM project activity proposed in the registered PDD are in place and that the project participants has operated the proposed CDM project activity as per the registered PDD. If an on-site visit is not conducted, the DOE shall justify the rationale of the decision.

197. If the DOE identifies that the implementation or operation of CDM project activity does not conform with the description contained in the registered PDD, the DOE shall conduct an assessment on the potential impacts due to these changes following the relevant guidelines established by the CDM Executive Board⁶⁴ and based on this assessment, the DOE shall submit a notification or a request for approval of changes from the project activity as described in the registered PDD prior to the conclusion of the verification/certification for the corresponding monitoring period.⁶⁵

⁶³ See decision 3/CMP.1, annex, paragraph 62 (g).

⁶⁴ See EB 48 report, paragraph 73, currently located at <<http://cdm.unfccc.int/EB/048/eb48rep.pdf>>, and its annex 67, “Guidelines on assessment of different types of changes from the project activity as described in the registered PDD”, currently located at <https://cdm.unfccc.int/EB/048/eb48_repan67.pdf>.

⁶⁵ See EB 48 report, paragraph 73, currently located at <<http://cdm.unfccc.int/EB/048/eb48rep.pdf>> and its annex 66, currently located at <https://cdm.unfccc.int/EB/048/eb48_repan66.pdf>.

(iii) Reporting requirements

198. For each monitoring period, the verification report shall describe:

- (a) The implementation status of the project. For project activities that consist of more than one site, the report shall clearly describe the status of implementation and starting date of operation for each site. For CDM project activities with phased implementation, the report shall state the progress of the proposed CDM project activity achieved in the each phase under verification. **If the phased-implementation is delayed, the report shall clearly describe the reasons and present the expected implementation dates;**
- (b) The actual operation of the proposed CDM project activity;
- (c) Information (data and variables) provided in the monitoring report that is different from that stated in the registered PDD and has caused an increase in estimates of the emission reductions in the current monitoring period or is highly likely to increase the estimates of emission reductions in the future monitoring periods;⁶⁶
- (d) Any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD.

2. Compliance of the monitoring plan with the monitoring methodology

(i) Requirement to be verified

199. The monitoring plan of the proposed CDM project activity shall comply with the applied methodology.⁶⁷

(ii) Means of verification

200. The DOE shall verify that the validated monitoring plan is in accordance with the approved methodology applied by the proposed CDM project activity.

201. If during verification, the DOE concludes that the monitoring plan is not in accordance with the monitoring methodology, the DOE shall request a revision to the monitoring plan prior to concluding its verification and making its certification decision. The DOE may request for revision of the monitoring plan covering the monitoring period under verification, for approval by the CDM Executive Board.⁶⁸

202. For monitoring aspects that are not specified in the methodology, particularly in the case of small-scale methodologies (e.g. additional monitoring parameters, monitoring frequency and calibration frequency), the DOE is encouraged to bring to the attention of the CDM Executive Board issues which may contribute in enhancing the level of accuracy and completeness of the monitoring plan.

⁶⁶ Discrepancies may include higher water availability than expected in the PDD, which may increase the electricity output from a hydropower plant, or a higher plant load factor owing to higher bagasse availability during the crushing season, which increases the production of steam and electricity.

⁶⁷ EB 33 report, currently located at <<http://cdm.unfccc.int/EB/033/eb33rep.pdf>>, states that “the Board requested that DOEs take note of the requirements of paragraph 2 of the ‘Procedures for revising monitoring plans in accordance with paragraph 57 of the modalities and procedures for the CDM’, and requested DOEs to confirm in all verification reports that the monitoring plan of the project activity is in accordance with the relevant approved methodology.”

⁶⁸ The procedures for revising monitoring plans are contained in the EB 49 report, annex 28, currently located at <http://cdm.unfccc.int/EB/049/eb49_repan28.pdf>.



(iii) Reporting requirements

203. The verification report shall provide a statement that the monitoring plan is in accordance with the approved methodology applied by the proposed CDM project activity or that the necessary revision to the monitoring plan or deviation prior to submitting request for issuance has been sought and approved by the CDM Executive Board.

3. Compliance of monitoring with the monitoring plan

(i) Requirement to be verified

204. Monitoring of reductions in GHG emissions to result from the proposed CDM project activity shall be implemented in accordance with the monitoring plan contained in the registered PDD⁶⁹ or the accepted revised monitoring plan.

(ii) Means of verification

205. The DOE shall confirm that:

- (a) The monitoring plan and the applied methodology have been properly implemented and followed by the project participants;
- (b) All parameters stated in the monitoring plan, the applied methodology and relevant CDM Executive Board decisions⁷⁰ have been sufficiently monitored and updated as applicable, including:
 - (i) Project emission parameters;
 - (ii) Baseline emission parameters;
 - (iii) Leakage parameters;
 - (iv) Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan.
- (c) The accuracy of equipment used for monitoring is in accordance with the relevant guidance provided by the CDM Executive Board and is controlled and calibrated in accordance with the monitoring plan;
 - (i) Monitoring results are consistently recorded as per approved frequency;
 - (ii) Quality assurance and quality control procedures have been applied in accordance with the monitoring plan.

⁶⁹ In accordance with decision 3/CMP.1, annex, paragraph 56 “Project participants shall implement the monitoring plan contained in the registered project design document”.

⁷⁰ For example, a decision at the thirty-fifth meeting of the CDM Executive Board provides clarification for the project activities that apply the approved methodology AM0001. This asks the DOE to check the value of “w” based on the past one year period during verification, which was not clearly stated in the approved methodology.



(iii) Reporting requirement

206. The verification report shall state that monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD or the accepted revised monitoring plan. The report shall list each parameter required by the monitoring plan and clearly state how the DOE verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the values in the monitoring reports.

4. Assessment of data and calculation of greenhouse gas emission reductions

(i) Requirement to be validated

207. GHG emission reductions achieved by/resulting from the proposed CDM project activity shall be calculated applying the selected methodology.

(ii) Means of verification

208. The DOE shall determine whether:

- (a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall opt to either make the most conservative assumption theoretically possible in finalizing the verification report⁷¹, or raise a request for deviation prior to submitting request for issuance, if appropriate;
- (b) Information provided in the monitoring report has been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis;
- (c) Calculations of baseline emissions, proposed CDM project activity emissions and leakage, as appropriate, have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document;
- (d) Any assumptions used in emission calculations have been justified;
- (e) Appropriate emission factors,⁷² IPCC default values and other reference values have been correctly applied.

(iii) Reporting requirement

209. The verification report shall contain:

- (a) An indication whether data were not available because activity levels or non-activity parameters were not monitored in accordance with the registered monitoring plan as well as any actions taken by the DOE to ensure that the most conservative assumption theoretically possible has been made;
- (b) A description of how the DOE cross-checked reported data;

⁷¹ For details see EB 26 report, paragraph 109 (b), currently located at <<http://cdm.unfccc.int/EB/026/eb26rep.pdf>>.

⁷² For application of *ex-post* grid emission factor during issuance stage see EB 51 report, paragraph 89, currently located at <http://cdm.unfccc.int/EB/051/eb51_rep.pdf> for further information.



- (c) A confirmation that appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed; and
- (d) An opinion if the assumptions, emission factors and default values that were applied in the calculations have been justified.

E. Additional verification activities

1. Background

210. Project participants may contract a DOE to undertake certain specific verification activities. The DOE shall apply the general means of verification and follow the reporting requirements described in chapter VI, section C and D above in carrying out these activities as well as the provisions of this section of the Manual.

2. Request for deviation

211. If the project participants have deviated from the provisions of the registered monitoring plan, the DOE shall submit a request for deviation prior to submitting request for issuance⁷³ as well as a request for deviation form⁷⁴ through the dedicated interface on the UNFCCC CDM website before providing its verification conclusion or making its certification decision. The DOE in the request shall provide complete, clear, and precise assessment and a description of the impact of the deviation on the emission reductions from the project activity.

212. A request for deviation is appropriate only if a change in the procedures for estimating or monitoring emissions was required due to a change in the conditions or circumstances of the proposed CDM project activity after it was registered as a proposed CDM project activity. The deviation shall be project-specific and shall not deviate from the methodology to the extent that a revision of the methodology would be required.

213. A request for deviation is not suitable if:

- (a) The monitoring plan is not in accordance with the monitoring methodology applied by the project activity; submission of a request for revision of the monitoring plan would be more appropriate;⁷⁵
- (b) The request would result in revisions to the approved methodology;
- (c) The request would result in a change in default parameter values other than those given in the approved methodology.

214. A request for deviation that is approved by the CDM Executive Board applies only to the monitoring period under verification. If the deviation from the provisions contained in the project

⁷³ See EB 49 report, paragraph 64, currently located <<http://cdm.unfccc.int/EB/049/eb49rep.pdf>> and its annex 26, currently located at <https://cdm.unfccc.int/EB/049/eb49_repan26.pdf> for procedure. This procedure and its related form, along with the "Procedures for requests to the Executive Board for deviation from an approved methodology" (EB 49, annex 4), replace the "Procedures for requests for deviation to the Executive Board (version 02, EB 24, annex 30)" and its related form and includes revisions in the procedures with respect to requesting deviation prior to submitting the request for issuance.

⁷⁴ See EB 49 report, paragraph 64, currently located at <<http://cdm.unfccc.int/EB/049/eb49rep.pdf>> and its annex 27, currently located at <https://cdm.unfccc.int/EB/049/eb49_repan27.pdf> for the form.

⁷⁵ See Chapter VI, sections E3.

documentation is to continue in future monitoring periods, the DOE shall submit a request for revision of the monitoring plan.⁷⁶

215. The verification report shall determine whether and how the monitoring report reflects the application of the approved guidance from the CDM Executive Board regarding the request for deviation.

3. Request for revision of the monitoring plan

216. If the monitoring plan is not in accordance with the monitoring methodology applied to the registered CDM project activity and/or does not reflect the actual monitoring activity based on the registered PDD, the DOE shall submit a request for revision of the monitoring plan⁷⁷ as well as a request for revision of monitoring plan form⁷⁸ via a dedicated interface on the UNFCCC CDM website prior to requesting issuance of CERs.

217. The DOE shall ensure that the level of accuracy and completeness⁷⁹ in the monitoring and verification process will not be reduced as a result of the proposed revision. The DOE shall, using objective evidence, assess the accuracy and completeness of each proposed revision to the monitoring plan including the frequency of measurements, the quality of monitoring equipment (e.g. calibration requirements, and the quality assurance and quality control procedures).

218. The verification report shall determine whether and how the monitoring report reflects the application by the project participants of the approved guidance from the CDM Executive Board regarding the request for revision of the monitoring plan.

4. Differences between requests for deviation and requests for revision of the monitoring plan

219. The table below illustrates the differences between requests for deviation and requests for revision of the monitoring plan.

Comparison between requests for deviation and requests for revision of the monitoring plan

	Request for deviation	Request for revision of the monitoring plan
Definition	A formal request for guidance from the CDM Executive Board of the clean development mechanism regarding deviations from provisions of the registered project documentation for the verified period only	A formal request to the CDM Executive Board to revise the monitoring plan to comply with the monitoring methodology or to improve accuracy and/or completeness of monitoring
Required documents	- Request for deviation form (F-CDMDEV-ISS)	- Request for revision of monitoring plan form (F-CDM-REVMP)

⁷⁶ See EB 43 report, paragraph 58, currently located at <<http://cdm.unfccc.int/EB/043/eb43rep.pdf>>.

⁷⁷ The procedures for revising monitoring plans are contained in the EB 49, annex 28, currently located at <https://cdm.unfccc.int/EB/049/eb49_repan28.pdf>.

⁷⁸ The form for revising monitoring plans are contained in the EB 49, annex 29, currently located at <https://cdm.unfccc.int/EB/049/eb49_repan29.pdf>.

⁷⁹ Completeness refers to inclusion of all relevant information for assessment of GHG emissions reductions and the information supporting the methods applied as required. For examples, if the DOE identifies an on-site generator for emergency which was not included in the monitoring plan during the verification process, the monitoring of fuel consumption of this generator should be included in the monitoring plan via this procedure.



	- Other relevant documents	- Revised monitoring plan (in clean and track change versions) - The DOE's validation opinion - Other relevant documents
Submission	Via a dedicated web interface	Via a dedicated web interface
<i>Note:</i> Requests for deviation or revision of the monitoring plan cannot be used to request guidance on changes in the project design from the registered project design document		

F. Verification report

220. Following the principle of transparency, the verification report shall give an overview of the verification process used by the DOE in order to arrive at its verification conclusions. All verification findings shall be clearly identified and justified.

221. The verification report shall provide the following:

- (a) A summary of the verification process and the scope of verification;
- (b) Details of the verification team;
- (c) Findings of the desk review and site visit;
- (d) All the DOE's findings and conclusions as to whether the proposed CDM project activity has been implemented in accordance with the PDD, the compliance of the monitoring plan with the monitoring methodology, the compliance of monitoring with the monitoring plan and assessment of data and calculation of GHG emission reductions;
- (e) A list of each parameter specified by the monitoring plan and a clear statement on how the values in the monitoring report have been verified;
- (f) An assessment and close out of any CARs, CLs or FARs issued to the project participants;
- (g) An assessment of remaining issues from the previous verification period, if appropriate;
- (h) A conclusion on the verified amount of emission reductions achieved.

222. The DOE shall describe all documentation supporting verification in the verification report and make it available on request.

G. Certification Report

223. Certification is the written assurance by the DOE that, during a specified time period, a proposed CDM project activity achieved/resulted in the reductions in anthropogenic emissions by sources of GHGs as verified.

224. The certification report shall constitute a request for issuance to the CDM Executive Board of CERs based on the verified amount of emission reductions stated in the verification report. Once submitted and published, the request for issuance of CERs is deemed final and a withdrawal of the request for issuance of CERs is considered as a cancellation of the written certification of the verified amount of emission reductions. The CDM Executive Board has provided procedures for the withdrawal



of a request for issuance of CERs.⁸⁰ These procedures ensure consistency, enhance transparency and provide clarity to project participants and DOEs regarding the necessary steps to withdraw a request for issuance of CERs and the implications of such a withdrawal.

History of the document

Version	Date	Nature of revision(s)
01.2	EB 55, Annex 1 30 July 2010	<ul style="list-style-type: none">• Incorporation of applicable decisions of the Board from EB 51 to EB 54;• Revision of references to the procedures, tools and guidance documents;• Editorial review.
01.1	EB 51, Annex 3 4 December 2009	<ul style="list-style-type: none">• Incorporation of applicable decisions of the Board from EB 44 to EB 50;• Revision of references to the procedures, tools and guidance documents;• Editorial review.
01	EB 44, Annex 3 28 November 2008	Initial adoption.
Decision Class: Regulatory Document Type: Standard Business Function: Accreditation		

⁸⁰ For details see EB 54 report, annex 33, “Procedures for withdrawal of a requests for issuance of certified emission reductions”, currently located at <https://cdm.unfccc.int/UserManagement/FileStorage/OBCKMN3I514JYQ8FL2XDGR7EZHW9TP>.