

**CDM-MP72-A07**

## Draft Methodological tool

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Combined tool to identify the baseline scenario and demonstrate additionality

Version 07.0 draft

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**United Nations**  
Framework Convention on  
Climate Change

## COVER NOTE

### 1. Procedural background

1. At the ninety-second meeting of the Executive Board of the Clean Development Mechanism (hereafter referred to as the Board), the Board considered a concept note on “Further elaboration on the proposed approach in expanding the application of the existing combined tool” and requested the Methodologies Panel (MP) to work on the revision of the “Combined tool to identify the baseline scenario and demonstrate additionality” (Combined Tool) by applying the approach included in the concept note. In addition, the Board requested the MP (a) ensure they do not add unnecessary burden to the project participants in step 1 of the tool, with regard to the identification of all available technologies; and (b) carefully analyse whether the application of the revised tool conflicts with any of the existing applicability of methodologies.
2. The above mandate is also included in the CDM panels and working groups workplans for the year of 2017.

### 2. Purpose

3. This document was prepared to address the mandate above to propose revision to the Combined Tool by applying the approach agreed by the Board at EB 92.

### 3. Impacts

4. If approved by the Board, the applicability of the Combined Tool will be expanded, thereby facilitating the baseline identification and additionality demonstration of proposed CDM project activities.

### 4. Subsequent work and timelines

5. This document will be published as a call for public input. The revised combined tool will be updated considering any input that may be received in the call.

### 5. Recommendations to the Board

6. Not applicable (call for public input).

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## 1. Introduction

1. This tool provides a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality. ~~These steps are:~~

~~(a) Step 0 Demonstration whether the proposed project activity is the first-of-its-kind;~~

~~(b) Step 1 Identification of alternative scenarios;~~

~~(c) Step 2 Barrier analysis;~~

~~(d) Step 3 Investment analysis; and~~

~~(e) Step 4 Common practice analysis.~~

## 2. Scope, applicability, and entry into force

### 2.1. Scope

2. Project participants shall apply the following four Steps:

(a) STEP 0. Demonstration that a proposed project activity is the first-of-its-kind;

(b) STEP 1. Identification of alternative scenarios;

(c) STEP 2. Barrier analysis;

(d) STEP 3. Investment analysis (if applicable);

(e) STEP 4. Common practice analysis.

3. The procedure is summarized in Figures 1 and 2. For more specific detail regarding the flowcharts please refer to the text.

~~4. In validating the application of this tool, designated operational entities (DOEs) should carefully assess and verify the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by project participants to support the selection of the baseline and demonstration of additionality. The elements checked during this assessment and the consequent conclusions should be documented transparently in the validation report.~~

## 2.2. Applicability

5. This tool is only applicable to methodologies for which the potential alternative scenarios to the proposed project activity available to project participants cannot be implemented in parallel to the proposed project activity.<sup>1</sup>
6. The tool is applicable to all types of proposed project activities. However, in some cases, methodologies referring to this tool may require adjustments or additional explanations as per the guidance in the respective methodologies. This could include, inter alia, a listing of relevant alternative scenarios that should be considered in Step 1, any relevant types of barriers other than those presented in this tool and guidance on how common practice should be established.

## 2.3. Entry into force

7. The date of entry into force is the date of the publication of the EB 96 meeting report on 24 September 2017.

## 3. Definitions

8. The definitions contained in the “Glossary of CDM terms” shall apply.
9. For this tool, the following definitions apply:
- (a) **Applicable geographical area** should be the entire host country. If the project participants opt to limit the applicable geographical area to a specific geographical area (such as province, region, etc.) within the host country, then they shall provide justification on the essential distinction between the identified specific geographical area and the rest of the host country;
- (b) **Measure<sup>2</sup>** (for emission reduction activities) is a broad class of greenhouse gas emission reduction activities possessing common features.

<sup>1</sup> For example, in the following situations a methodology could refer to this tool:

- For an energy efficiency CDM project where the identified potential alternative scenarios are: (a) retrofit of an existing equipment, or (b) replacement of the existing equipment by new equipment, or (c) the continued use of the existing equipment without any retrofits;
- For a CDM project activity related to the destruction of a greenhouse gas in one site where the identified potential alternative scenarios are: (a) installation of a thermal destruction unit, or (b) installation of a catalytic destruction system, or (c) no abatement of the greenhouse gas;
- For a transport CDM project where the identified potential alternative scenarios are (a) development of new rail infrastructure to satisfy transportation demand for 100 per cent of cargo by rail, or (b) transport of 100 per cent of cargo by road.

In these cases, the project proponents could not implement the alternatives in parallel but they could only implement one of them.

However, the tool is, for example, not applicable in the following situation: the CDM project activity is the installation of a Greenfield facility that provides a product to a market (i.e. electricity, cement, etc.) where the output could be provided by other existing facilities or new facilities that could be implemented in parallel with the CDM project activity independently by other actors.

<sup>2</sup> Refer to the “Methodological tool: Additionality of first-of-its-kind project activities” for more detailed information regarding measures covered in the framework.

- (c) **Output** is good/services produced by the project activity including, among other things, heat steam, electricity, methane, and biogas unless otherwise specified in the applied methodology.

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## 4. Methodology procedure

**Figure 1. Flowchart of the step-wise approach (Case 1)**

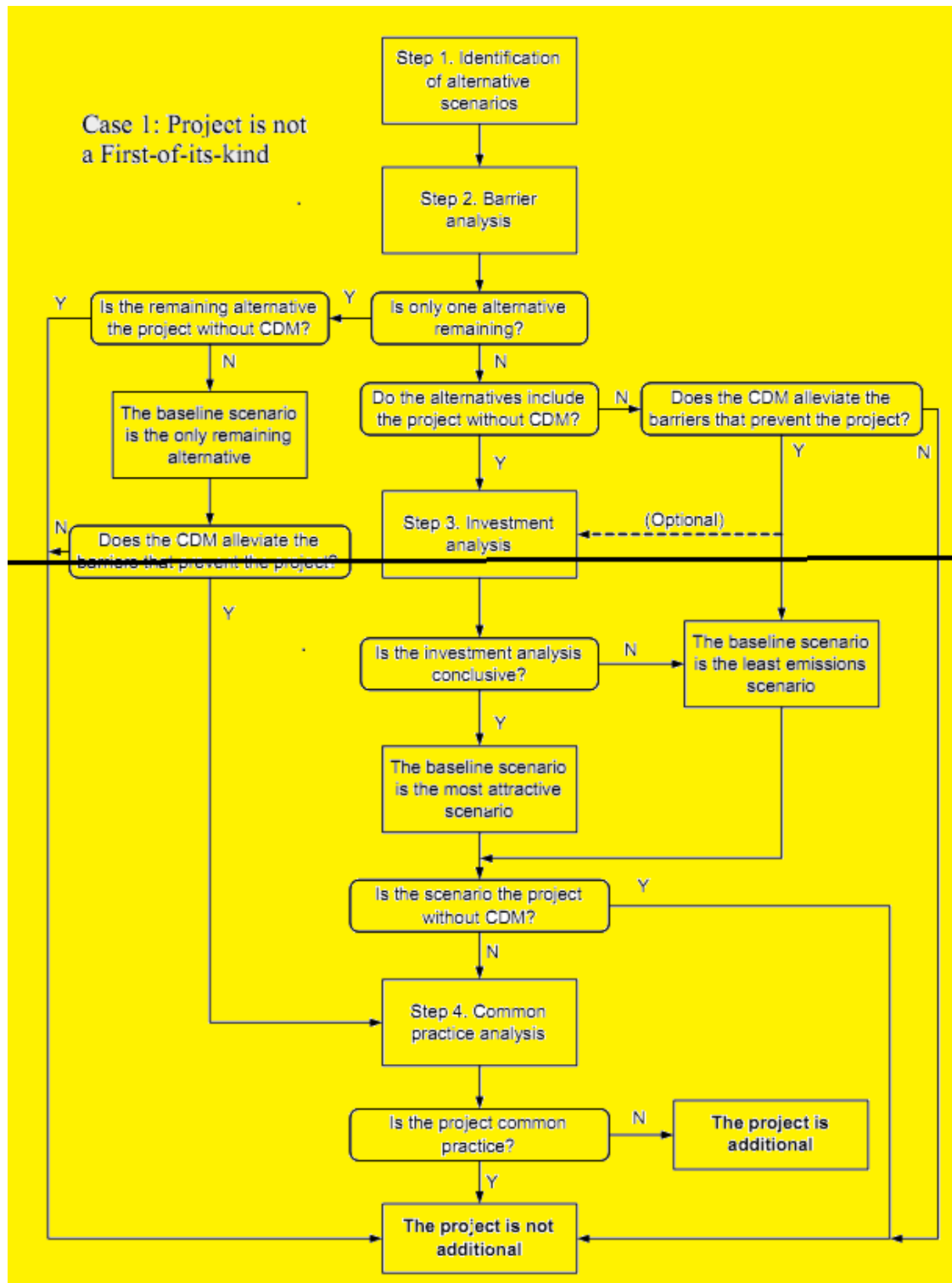
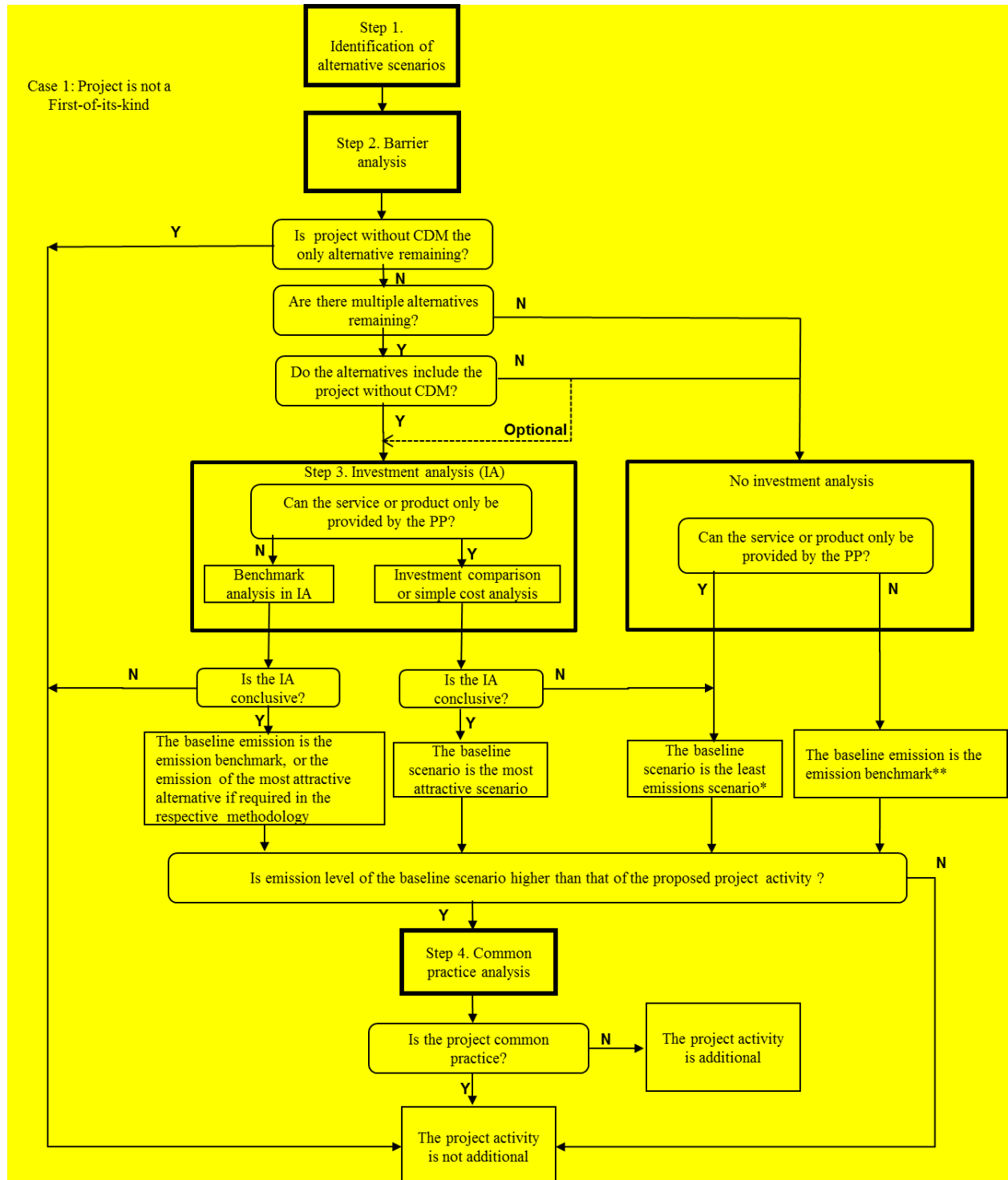


Figure 2. Flowchart of the step-wise approach (Case 1: Project is not a first-of-its-kind)



\* In case of only one alternative remaining, the baseline scenario is the remaining alternative;  
\*\* If not required otherwise in the respective methodology



**Figure 3. Flowchart of the step-wise approach (Case 2)**

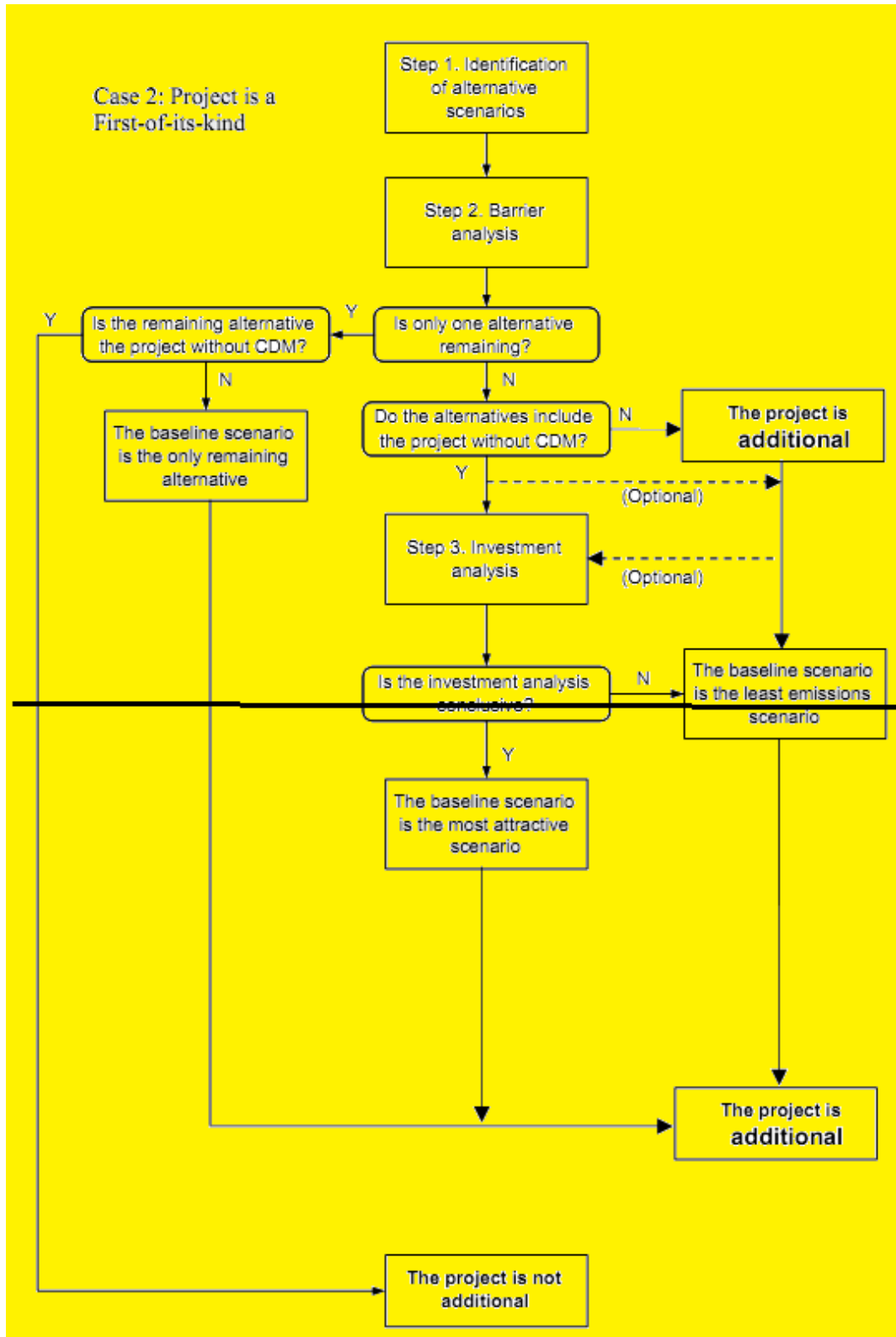
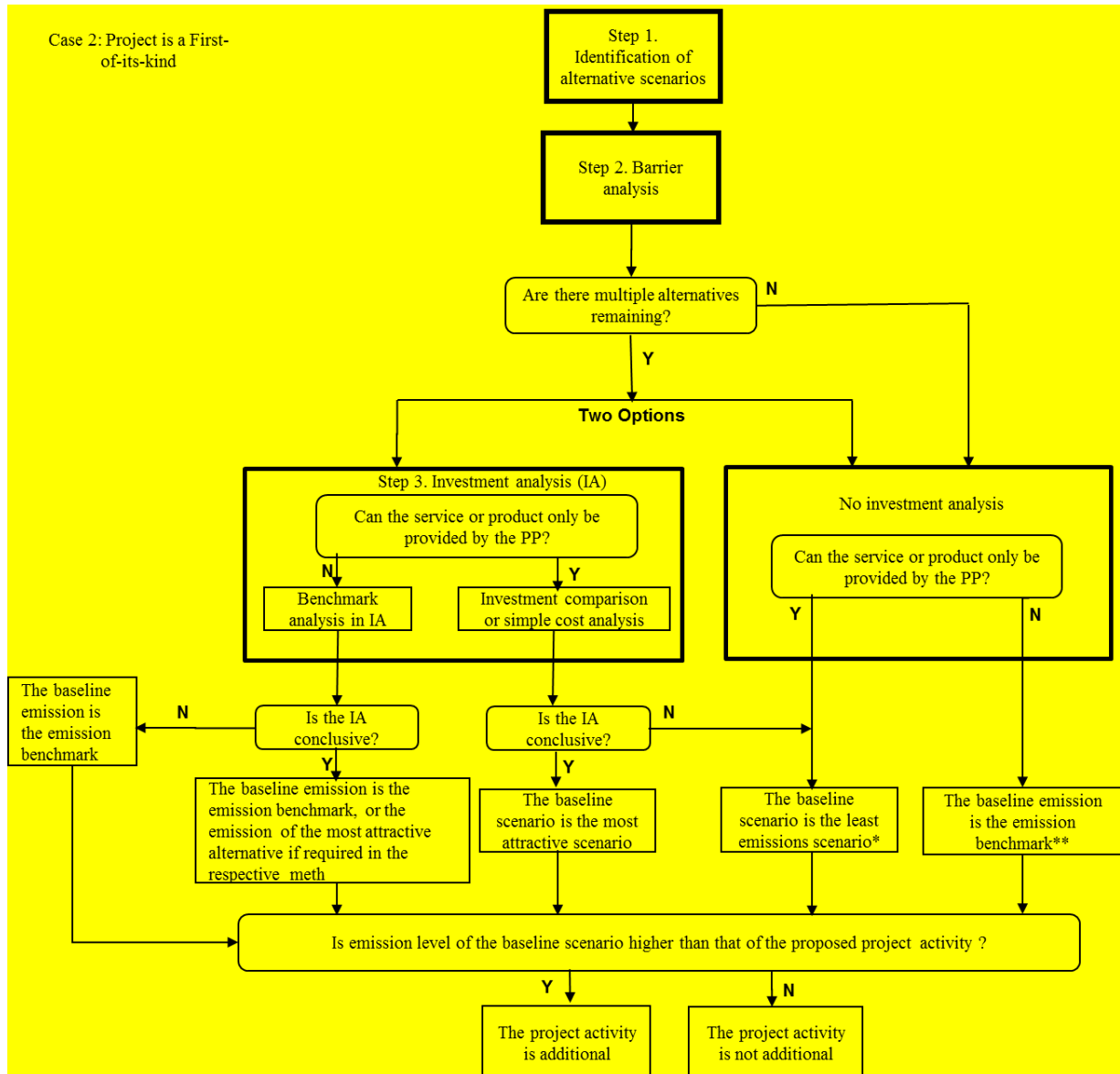


Figure 4. Flowchart of the step-wise approach (Case 2: Project is a first-of-its-kind)



\* In case of only one alternative remaining, the baseline scenario is the remaining alternative;

\*\* If not required otherwise in the respective methodology

#### 4.1. Step 0: Demonstration whether the proposed project activity is the first-of-its-kind

10. This step is optional. If it is not applied it shall be considered that the proposed project activity is not the first-of-its-kind.
11. This step serves for the demonstration of additionality by means of the first-of-its-kind approach.
12. If the proposed CDM project activity(ies) apply measure(s) that are listed in the “Methodological tool: Additionality of first-of-its-kind project activities”, then the latest version of the “Methodological tool: Additionality of first-of-its-kind project activities” available on the UNFCCC website shall be applied to demonstrate that the project activity is the first-of-its-kind.
13. If the proposed CDM project activity(ies) apply other measure(s)<sup>3</sup> than those identified in the “Methodological tool: Additionality of first-of-its-kind project activities”, the project proponents shall propose an alternative approach for demonstrating that a project is a “first-of-its-kind” (equivalent of Step 0).

##### Outcome of Step 0:

Conclusion I: The proposed project activity is the first-of-its-kind.

Conclusion II: The proposed project activity is not the first-of-its-kind.

In both cases, proceed to Step 1

#### 4.2. Step 1: Identification of alternative scenarios

14. This Step serves to identify all alternative scenarios to the proposed CDM project activity(s) which can be the baseline scenario:

##### 4.2.1. Step 1a: Define alternative scenarios to the proposed CDM project activity

15. Identify all alternative scenarios that (a) are available to the project participants, (b) are mutually exclusive, and (c) provide the same output (service or product) as the proposed CDM project activity.<sup>4</sup> These alternative scenarios shall include:

- (a) S1: The proposed project activity undertaken without being registered as a CDM project activity;

<sup>3</sup> For example: transport, industrial gases and afforestation/reforestation projects.

<sup>4</sup> For example:

- In the case of a project reducing emissions in the aluminium or cement production, the output provided by the alternative scenarios should be the production of the same quality of aluminium or the production of a cement type that can be used in the same applications as the cement type produced by the project activity;
- In the case of a project improving the energy efficiency of motors in a facility, the service provided is mechanical energy. Different scenarios to produce the same quantity of mechanical energy should be considered;
- In the case of a landfill gas capture project, the service provided by the project includes operation of a landfill. Alternatives scenarios to the project could include different ways to operate the landfill, such as no capture of methane, capture and flaring of the methane or capture and combustion of the methane for energy generation.

- (b) S2: Where applicable, no investment is undertaken by the project participants, i.e., the same output as that produced by the proposed CDM project activity can also be provided by others than the project proponent (i.e., the PP is not the only output provider). ~~but third party(ies) undertake(s) investments or actions which provide the same output to users of the project activity,~~ For example:
- (i) In the case of a Greenfield power project, an alternative scenario may be that the project participants would not invest in ~~the Greenfield another~~ power plant but that power would be generated in existing and/or new power plants in the electricity grid;
- (ii) In the case of a transportation project, an alternative scenario may be that the project participants would not invest in alternative modes (e.g. rail or pipelines), but these alternatives would be implemented by third parties.
- (c) S3: Where applicable, the continuation of the current situation, *not* requiring any investment or expenses to maintain the current situation, such as, inter alia:
- (i) The continued venting of methane from a landfill;
- (ii) The continued release of N<sub>2</sub>O from adipic or nitric acid production.
- (d) S4: Where applicable, the continuation of the current situation, requiring an investment or expenses to maintain the current situation, such as, inter alia:
- (i) The continued use of an existing boiler involving expenses for operation and maintenance;
- (ii) The continued use of a specific fuel mix for power generation in an existing power plant;
- (iii) The continued use of existing transportation infrastructure for transporting a product.
- (e) S5: Other plausible and credible alternative scenarios to the project activity scenario, including the common practices in the relevant sector, which deliver the same output considering examples of scenarios identified in the underlying methodology where relevant;
- (f) S6: Where applicable, the “proposed project activity undertaken without being registered as a CDM project activity” to be implemented at a later point in time (e.g. due to existing regulations, end-of-life of existing equipment, financing aspects).
16. If the proposed CDM project activity includes several different facilities, technologies or outputs, alternative scenarios for each of them should be identified separately. **Feasible Realistic** combinations of these should be considered as possible alternative scenarios to the proposed project activity.<sup>5</sup>

<sup>5</sup> For example:

- In case of a cogeneration project activity, alternative scenarios for heat and electricity generation should be established separately;
- In case of a project that improves energy efficiency in several boilers with specific different characteristics (e.g. size, technology, age, etc.), alternative scenarios should be established for each boiler or for types of boilers with broadly similar characteristics.

17. For identifying relevant alternative scenarios, provide an overview of **all other** technologies or practices **(including other registered CDM projects)** that provide the same output as the proposed CDM project activity and that have been implemented previously or are currently underway in the applicable geographical area. The applicable geographical area should include preferably ten facilities (or projects), **reflecting the variety of the available technologies**, that provide the same output as the proposed CDM project activity. If less than ten facilities (or projects) that provide the same output as the proposed CDM project activity are found in the applicable geographical area, the applicable geographical area may be expanded to an area that covers if possible, ten such facilities (or projects) **or the whole host country**. Other registered CDM project activities are not to be included in the analysis **count to reach 10 facilities in defining the applicable geographical area**. Provide relevant documentation to support the results of the analysis, **including clear justification on the consideration of S2 if excluded from further consideration**.

**Outcome of Step 1a:** List of plausible alternative scenarios to the project activity

#### 4.2.2. Step 1b: Consistency with mandatory applicable laws and regulations

18. The alternative scenario(s) shall be followed with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.<sup>6</sup> (This Step does not consider national and local policies that do not have legally-binding status).
19. If an alternative scenario does not comply with all mandatory applicable legislation and regulations, then show that, based on an examination of current practice in the country or region in which the mandatory law or regulation applies, those applicable mandatory legal or regulatory requirements are systematically not enforced and that non-compliance with those requirements is widespread in the country. If this cannot be shown, then eliminate the alternative scenario from further consideration.
20. If the proposed project activity is the only alternative scenario amongst the ones considered by the project participants that follows all mandatory regulations with which there is general compliance, then the proposed CDM project activity is not additional.

**Outcome of Step 1b:** List of alternative scenarios to the project activity that follow mandatory legislation and regulations considering the enforcement in the region or country and Board decisions on national and/or sectoral policies and regulations.

If the above-mentioned list contains only one scenario, namely: S1 - the proposed project activity undertaken without being registered as a CDM project activity, then the proposed project activity is not additional and any remaining procedures of this tool are not applicable.

Otherwise, proceed to Step 2 (Barrier analysis).

<sup>6</sup> For example, an alternative consisting of an open, uncapped landfill would be non-complying in a country where this scenario would imply violations of safety or environmental regulations pertaining to landfills.

### 4.3. Step 2: Barrier analysis

21. This step serves to identify barriers and to assess which alternative scenarios are prevented by these barriers. Please note that the latest approved version of the “Guidelines for objective demonstration and assessment of barriers”, available on the UNFCCC website, shall be considered when applying this step.

#### 4.3.1. Step 2a: Identify barriers that would prevent the implementation of alternative scenarios

22. Establish a complete list of realistic and credible barriers that may prevent alternative scenarios to occur. Such realistic and credible barriers may include:

- (a) Investment barriers, other than insufficient financial returns as analyzed in Step 3, inter alia:
  - (i) For alternatives undertaken and operated by **private** entities: Similar activities have only been implemented with grants or other non-commercial financing terms. Similar activities are defined as activities that rely on a broadly similar technology or practices, are of a similar scale, take place in a comparable environment with respect to regulatory framework and are undertaken in the applicable geographical area, as defined in Step 1a above;
  - (ii) No **private** capital is available from domestic or international capital markets due to real or perceived risks associated with investments in the country where the project activity is to be implemented, as demonstrated for example, by the credit rating of the country or other country investment reports of reputed origin (**e.g. country investment grade or country risk reports**).
- (b) Technological barriers, inter alia:
  - (i) Skilled and/or properly trained labor to operate and maintain the technology is not available in the applicable geographical area, which leads to an unacceptably high risk of equipment disrepair, malfunctioning or another underperformance;
  - (ii) Lack of infrastructure for implementation and logistics for maintenance of the technology (e.g. natural gas cannot be used because of the lack of a gas transmission and distribution network);
  - (iii) Risk of technological failure: the process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information;
  - (iv) The particular technology used in the proposed project activity is not available in the applicable geographical area.

- (c) Other barriers, preferably specified in the underlying methodology as examples.

**Outcome of Step 2a:** List of barriers that may prevent one or more alternative scenarios to occur.

#### 4.3.2. Step 2b: Eliminate alternative scenarios which are prevented by the identified barriers

23. Identify which alternative scenarios are prevented by at least one of the barriers listed in Step 2a, and eliminate those alternative scenarios from further consideration. All alternative scenarios shall be compared to the same set of barriers. The assessment of the significance of barriers should consider the level of access to and availability of information, technologies and skilled labour in the specific context of the industry where the project type is located. For example, projects located in sectors with small and medium sized enterprises may not have the same means to overcome technological barriers as projects in a sector where typically large or international companies operate.

**Outcome of Step 2b:** List of alternative scenarios to the project activity that are not prevented by any barrier.

24. In applying Steps 2a and 2b, provide transparent and documented evidence, and offer conservative interpretations of this evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternative scenarios are prevented by these barriers. The type of evidence to be provided should include at least one of the following:

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- (a) Relevant legislation, regulatory information or industry norms;
  - (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc.) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc.;
  - (c) Relevant data from national or international statistics;
  - (d) Documentation of relevant market data (e.g. market prices, tariffs, rules);
  - (e) Written documentation from the company or institution developing or implementing the CDM project activity or the CDM project developer, such as minutes from Board meetings, correspondence, feasibility studies, financial or budgetary information, etc.;
  - (f) Documents prepared by the project developer, contractors or project partners in the context of the proposed project activity or similar previous project implementations;
  - (g) Written documentation of independent expert judgements from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others.

**Outcome of Step 2:**

1. If the proposed project activity undertaken without being registered as a CDM project activity is the only alternative scenario that is not prevented by any barrier (i.e., answer of “Yes” to the question “*Is project without CDM the only alternative remaining?*” in Figure 1), the project activity is not additional. In such a case, the remaining procedures of this tool are not applicable.
2. If there is only one alternative scenario that is not prevented by any barrier and it is not the proposed project activity undertaken without being registered as a CDM project activity (i.e., answer of “No” to question “*Are there multiple alternatives remaining?*” in Figure 1 or Figure 2), then the following applies:
  - (a) If the output can only be provided by the Project proponent, then this alternative is identified as the baseline scenario.
  - (b) If the output can also be provided by others than the project proponent (e.g. the market, a third party), an emission benchmark approach is required, if not specified differently in the respective methodology<sup>7</sup>. The baseline scenario corresponds to the scenario representing the emission benchmark. For example, the emission benchmark could be the grid emission factor, and the corresponding baseline scenario is the operation of the power grid.
3. If more than one alternative scenario is not prevented by any barrier (i.e., answer of “Yes” to the question “*Are there multiple alternatives remaining?*” in Figure 1 or Figure 2), then the following applies:
  - (a) If the proposed project activity is not the first-of-its-kind (i.e., the Case 1 in Figure 1.), check whether the remaining alternative scenarios include the proposed project activity undertaken without being registered as a CDM project activity (i.e., the question “*Do the alternatives include the project without CDM?*” in Figure 1):
    - (i) If Yes, then proceed to Step 3. (Investment Analysis);
    - (ii) If No, the project participants may choose either of the two options below:  
Option 1: Go to Step 3 (investment analysis); or  
Option 2: Go to the other route “No Investment Analysis” parallel to Step 3 in Figure 1 to justify whether the service or product can only be provided by the project proponent:
      - a. If Yes, baseline scenario is the alternative with the lowest emissions among the remaining alternatives, after excluding the proposed project activity undertaken without being registered as a CDM project activity from the list of remaining scenarios;
      - b. If No, an emission benchmark approach (e.g., grid emission factor) is required if not specified differently in the respective methodology<sup>8</sup>. The baseline scenario corresponds to the scenario representing the emission benchmark (e.g., the operation of the power grid).
  - (b) If the proposed project activity is the first-of-its-kind (i.e., the Case 2 in Figure 2.), the project participants may choose either of the two options below for the baseline scenario identification:  
Option 1: Go to Step 3. (investment analysis); or  
Option 2: Go to the other route parallel to Step 3 in Figure 2 to justify whether the service or product can only be provided by the project proponent:
    - (i) If Yes, baseline scenario is the alternative with the lowest emissions among the remaining alternatives, after excluding the proposed project activity undertaken without being registered as a CDM project activity from the list of remaining scenarios.



- (ii) If No, an emission benchmark approach (e.g., grid emission factor) is required if not specified differently in the respective methodology<sup>9</sup>. The baseline scenario corresponds to the scenario representing the emission benchmark (e.g., the power grid).
4. If the emission level of the alternative considered as baseline scenario is lower than or equal to that of the “proposed project activity undertaken without being registered as a CDM project activity”, then the project activity is not additional. Otherwise, proceed to Step 4 (common practice analysis) if the project activity is not the first-of-its-kind (i.e., the Case 1 in Figure 1.).
1. If there is only one alternative scenario that is not prevented by any barrier, then the following applies:
- (a) If this alternative scenario is the proposed project activity undertaken without being registered as a CDM project activity, then the project activity is not additional. In such a case any remaining procedures of this tool are not applicable.
- (b) If this alternative scenario is not the proposed project activity without being registered as a CDM project activity, then this alternative is identified as the baseline scenario.
- (i) If the proposed project activity is the first-of-its-kind then it is additional, and the remaining procedures of this tool are not applicable.
- (ii) Otherwise, the following applies: explain — using qualitative or quantitative arguments — how the registration of the CDM project activity will alleviate the barriers that prevent the proposed project activity from occurring in the absence of the CDM. If the CDM alleviates the identified barriers that prevent the proposed project activity from occurring, proceed to Step 4, otherwise the project activity is not additional.

<sup>7</sup> The guidance on how the emission benchmark is developed can be found in the respective methodology.

<sup>8</sup> The guidance on how the emission benchmark is developed can be found in the respective methodology. If applicable, the methodology shall also provide specific guidance on whether emission benchmark alone is sufficient, or it shall still be compared against the emission levels of the most attractive alternative scenario.

<sup>9</sup> The guidance on how the emission benchmark is developed can be found in the respective methodology. If applicable, the methodology shall also provide specific guidance on whether emission benchmark alone is sufficient, or it shall still be compared against the emission level of the most attractive alternative scenario.

2. If there is more than one alternative scenario that is not prevented by any barrier, then the following applies:
- (a) If the alternative scenarios include the proposed project activity undertaken without being registered as a CDM project activity, then the following applies:
    - (i) If the proposed project activity is the first-of-its-kind then it is additional and for the baseline scenario identification the project participants may choose to either:
      - Option 1: Go to Step 3 (investment analysis); or
      - Option 2: Exclude the proposed project activity undertaken without being registered as a CDM project activity from the set of the alternative scenarios. For Option 2, from among the remaining scenarios identify the one with the lowest emissions<sup>10</sup> (i.e. the most conservative) as the baseline scenario and any remaining procedures of this tool are not applicable.
    - (b) If the proposed project activity is not the first-of-its-kind, then directly proceed to Step 3 (investment analysis).
3. If the alternative scenarios do not include the proposed project activity undertaken without being registered as a CDM project activity, then the following applies:
- (a) If the proposed project activity is the first-of-its-kind then it is additional. For identification of baseline scenario project participants may choose to either:
    - Option 1: Go to Step 3 (investment analysis); or
    - Option 2: Identify the alternative scenario with the lowest emissions<sup>11</sup> (i.e. the most conservative) as the baseline scenario. In such a case any remaining procedures of this tool are not applicable.
  - (b) If the proposed project activity is not the first-of-its-kind, then:
    - explain—using qualitative or quantitative arguments—how the registration of the CDM project activity will alleviate the barriers that prevent the proposed project activity from occurring in the absence of the CDM. If the CDM alleviates the identified barriers that prevent the proposed project activity from occurring, project participants may choose to either:
      - Option 1: Go to Step 3 (investment analysis); or
      - Option 2: Identify the alternative scenario with the lowest emissions<sup>12</sup> (i.e. the most conservative) as the baseline scenario, and proceed to Step 4.
    - If the CDM does not alleviate the identified barriers that prevent the proposed project activity from occurring, then the project activity is not additional.

#### 4.4. Step 3: Investment analysis

25. The objective of Step 3 is to compare the economic or financial attractiveness of the alternative scenarios remaining after Step 2 by conducting an investment analysis. The analysis should include all alternative scenarios remaining after Step 2, including scenarios of where the project participants do not undertake an investment (S2 or S3).

<sup>10</sup>For alternative scenarios where the project participants do not undertake investments (i.e. scenarios as described in S2 or S3), the respective emissions should be determined in accordance with the underlying methodology.

<sup>11</sup>For alternative scenarios where the project participants do not undertake investments (i.e. scenarios as described in S2 or S3), the respective emissions should be determined in accordance with the underlying methodology.

<sup>12</sup>For alternative scenarios where the project participants do not undertake investments (i.e. scenarios as described in S2 or S3), the respective emissions should be determined in accordance with the underlying methodology.

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26. Please note that the latest approved version of the “Methodological tool: Investment analysis”, available on the UNFCCC website, shall be considered when applying this step. In addition, the choice between the Benchmark Analysis versus the Investment Comparison Analysis and Simple cost analysis is determined by whether the output can only be provided by the project proponent. The substantiation of the choice with supported evidence shall be clearly presented in the project design document. Furthermore, for the purpose of simplification, the choice of benchmark analysis is mandatory for the following two situations:
- (a) The proposed project activity is developed as part of a portfolio of technologies delivering electricity to the power grid;<sup>13</sup>
  - (b) The project proponent is the only player to supply power to the grid in the applicable geographical area (i.e., monopoly).
27. Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service (e.g. levelized cost of electricity production in \$/kWh or levelized cost of delivered heat in \$/GJ) most suitable for the project type and decision-making context. ~~If one of the alternative scenarios remaining after Step 2 corresponds to the situation described in S2 or S3, then use either the NPV or the IRR as financial indicator in the analysis.~~
28. Calculate the suitable financial indicator for all alternative scenarios remaining after Step 2. Include all relevant costs (including, for example, investment operations and maintenance costs), and revenues (including subsidies/fiscal incentives,<sup>14</sup> ODA, etc. where applicable), and, as appropriate, non-market costs and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.
29. For alternative scenarios that correspond to the situation described in S2 or S3 ~~and that do not involve any investment costs, operational costs or revenues~~, use the following values for the financial indicator to reflect such a situation:
- (a) If the financial indicator is the NPV: Assume a value of NPV equal to zero;
  - (b) If the financial indicator is the IRR: Use as the IRR the financial benchmark, as determined through the options (a) to (e) below.
30. The financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. In the particular case where the project activity can only be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.<sup>15</sup>

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<sup>13</sup>For example, the proposed biomass power plant is a part of a programme involving a portfolio of power generation options (e.g., coal, natural gas, biomass power plant etc.) to be implemented by the project proponent.

<sup>14</sup>Note that according to guidance by the Board (EB 22, Annex 3), subsidies and incentives may be excluded from consideration in certain cases.

<sup>15</sup>For example, when the project activity upgrades an existing process or uses a resource (i.e. some waste) available on the project site and that is not traded.

31. The discount rate (in the case of the NPV) or the financial benchmark (in the case of the IRR) shall be determined as per the procedure mentioned in the “Methodological tool: Investment Analysis”.
32. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the PDD, so that a reader can reproduce the analysis and obtain the same results. Refer to critical techno-economic parameters and assumptions (such as capital costs, fuel prices, lifetimes, and discount rate or cost of capital). Justify and/or cite assumptions in a manner that can be validated by the DOE. In calculating the financial indicator, the risks of the alternative scenarios can be included through the cash flow pattern, subject to project-specific expectations and assumptions (e.g. insurance premiums can be used in the calculation to reflect specific risk equivalents). Assumptions and input data for the investment analysis shall not differ across alternative scenarios, unless differences can be well substantiated.
33. Present in the CDM-PDD submitted for validation a clear comparison of the financial indicator for all alternative scenarios and rank the alternative scenarios according to the financial indicator.
34. Include a sensitivity analysis to assess whether the conclusion regarding the financial attractiveness is robust to reasonable variations in the critical assumptions. The investment comparison analysis provides a valid argument in identifying the baseline scenario only if it consistently supports (for a realistic range of assumptions) the conclusion that one alternative scenario is the most economically and/or financially attractive.

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**Outcome of Step 3:**

1. For the case when benchmark analysis has been chosen:
  - (a) If the proposed project activity is not the first-of-its-kind (i.e., the Case 1 in Figure 1.) and the sensitivity analysis is not conclusive, the project activity is not additional;
  - (b) If the proposed project activity is the first-of-its-kind (i.e., the Case 2 in Figure 2.) and the sensitivity analysis is not conclusive, the project activity is still additional and an emission benchmark approach (e.g., grid emission factor) is required<sup>16</sup>. The baseline scenario corresponds to the scenario representing the emission benchmark (e.g., the operation of the power grid).
  - (c) Irrespective of the proposed project activity is the first-of-its-kind or not, if the sensitivity analysis is conclusive to confirm the result of the benchmark analysis, an emission benchmark approach (e.g., grid emission factor) is required if not specified differently in the respective methodology<sup>17</sup>. The baseline scenario corresponds to the scenario representing the emission benchmark (e.g., the power grid).
2. For the case when investment comparison or simple cost analysis has been chosen, rank list of alternative scenarios according to the most suitable financial indicator, taking into account the results of the sensitivity analysis.
  - (a) If the sensitivity analysis is not conclusive, then the alternative scenario to the project activity with least emissions among the alternative scenarios is considered as the baseline scenario;
  - (b) If the sensitivity analysis is conclusive to confirm the result of the investment comparison analysis or simple cost analysis, then the most economically or financially attractive alternative scenario is considered as the baseline scenario;
  - (c) If the alternative considered as baseline scenario is the “proposed project activity undertaken without being registered as a CDM project activity”, then the project activity is not additional.
3. If the emission level of the alternative considered as baseline scenario is lower than or equal to that of the “proposed project activity undertaken without being registered as a CDM project activity”, then the project activity is not additional. Otherwise, proceed to Step 4 (common practice analysis) if the project activity is not the first-of-its-kind (i.e., the Case 1 in Figure 1.).

Ranking of the short list of alternative scenarios according to the most suitable financial indicator, taking into account the results of the sensitivity analysis.

If the sensitivity analysis is not conclusive, then the alternative scenario to the project activity with least emissions among the alternative scenarios is considered as baseline scenario. If the sensitivity analysis confirms the result of the investment comparison analysis, then the most economically or financially attractive alternative scenario is considered as baseline scenario.

If the alternative considered as baseline scenario is the “proposed project activity undertaken without being registered as a CDM project activity”, then the project activity is not additional. Otherwise, proceed to Step 4.

<sup>16</sup> The guidance on how the emission benchmark is developed can be found in the respective methodology.

<sup>17</sup> The guidance on how the emission benchmark is developed can be found in the respective methodology. If applicable, the methodology shall also provide specific guidance on whether emission benchmark alone is sufficient, or it shall still be compared against the emission levels of the most attractive alternative scenario.

#### **4.5. Step 4: Common practice analysis**

35. If the proposed project activity is the first-of-its-kind, then this step is not applicable. Otherwise, the previous Steps shall be complemented with an analysis of the extent to which the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and applicable geographical area. This test is a **credibility check** to demonstrate additionality and complements the barrier analysis (Step 2) and, where applicable, the investment analysis (Step 3).

36. If the proposed CDM project activity(s) applies measure(s) that are listed in the definitions section above proceed to Step 4 a, otherwise, proceed to Step 4 b:

##### **4.5.1. Step 4a: The proposed CDM project activity(s) applies measure(s) that are listed in the definitions section above**

37. The latest version of the “Methodological tool: Common practice” available on the UNFCCC website shall be applied.

38. Proceed directly to the box Outcome of Step 4.

##### **4.5.2. Step 4b: The proposed CDM project activity(s) does not apply any of the measures that are listed in the definitions section above**

39. Provide an analysis to which extent similar activities to the proposed CDM project activity have been implemented previously or are currently underway. Similar activities are defined as activities (i.e. technologies or practices) that are of similar scale, take place in a comparable environment, inter alia, with respect to the regulatory framework and are undertaken in the applicable geographical area, as defined in Step 1a above. Other CDM project activities (registered project activities and project activities which have been published on the UNFCCC website for global stakeholder consultation as part of the validation process) are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. Based on that analysis, describe whether and to which extent similar activities have already diffused in the applicable geographical area.

40. If similar activities to the proposed project activity are identified, then compare the proposed project activity to the other similar activities and assess whether there are essential distinctions between the proposed project activity and the similar activities. If this is the case, point out and explain the essential distinctions between the proposed project activity and the similar activities and explain why the similar activities enjoyed certain benefits that rendered them financially attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or why the similar activities did not face barriers to which the proposed project activity is subject.

41. Essential distinctions may include a serious change in circumstances under which the proposed CDM project activity will be implemented when compared to circumstances under which similar projects were carried out. For example, new barriers may have arisen, or promotional policies may have ended, leading to a situation in which the proposed CDM project activity would not be implemented without the incentive provided by the CDM. The change must be fundamental and verifiable.

42. The proposed project activity is regarded as “common practice” if similar activities can be observed and essential distinctions between the proposed CDM project activity and similar activities cannot be identified.

**Outcome of Step 4:** If outcome of Step 4 is that the proposed project activity is not regarded as “common practice”, then the proposed project activity is additional.  
If outcome of Step 4 is that the proposed project activity is regarded as “common practice” then the proposed CDM project activity is not additional.

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### Document information

Version	Date	Description
Draft 07.0	3 April 2017	MP 72, Annex 07 A call for public input will be issued for this draft methodological tool. Revision to: <ul style="list-style-type: none"> <li>• Broaden the applicability of this tool;</li> <li>• Elaborate the flowchart for step-wise approach.</li> </ul>
06.0	24 July 2015	EB 85, Annex 11 Revision to: <ul style="list-style-type: none"> <li>• Clarify the list of measures covered under “other measures” and include alternative scenarios for transport projects;</li> <li>• Improve the language, readability, clarity and consistency.</li> </ul>
05.0.0	23 November 2012	EB 70, Annex 9 Inclusion of reference to the latest approved “Guidelines on additionality of first-of-its-kind project activities” and the “Guidelines on common practice”.
04.0.0	2 March 2012	EB 66, Annex 48 Revision to: <ul style="list-style-type: none"> <li>• Apply request contained in EB 65, para 87 to incorporate all provisions included in the “Guidelines on additionality of first-of-its-kind project activities” (version 01.0) and the “Guidelines on common practice” (version 01.0) in the “Combined tool to identify the baseline scenario and demonstrate additionality”.</li> </ul>
03.0.1	11 August 2011	Editorial amendment to: <ul style="list-style-type: none"> <li>• Remove the “Guidelines on the assessment of investment analysis” as an annex within this document and instead add it as a reference;</li> <li>• Add reference to the “Guidelines for objective demonstration and assessment of barriers”.</li> </ul>
03.0.0	15 April 2011	EB 60, Annex 7 Revision to: <ul style="list-style-type: none"> <li>• Include situations in which not all potential alternative scenarios to the proposed project activity are available options to the project participants. To that end, Sub-step 1a was revised with</li> </ul>

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<i>Version</i>	<i>Date</i>	<i>Description</i>
		<p>the inclusion of scenarios S2, S3 and S4. And, Step 3 was revised with the inclusion of procedures to assess scenarios S2 and S3 through a benchmark analysis;</p> <ul style="list-style-type: none"> <li>• Broaden applicability;</li> <li>• Further ensure consistency with the “Tool for the demonstration and assessment of additionality”;</li> <li>• Include editorial improvements;</li> <li>• Update the annex “Guidance on the assessment of investment analysis”, to the latest approved version of 03.1.</li> <li>• Format changes.</li> </ul>
02.2	26 August 2008	Addition of the “Guidance on the assessment of investment analysis”, version 2, as an annex to the tool.
02.1	21 February 2007	The revision was made to version 2 to clarify the flow diagram of the tool.
02.0	15 December 2006	EB 28, Annex 14.
01.0	1 November 2006	EB 27, Annex 9 Initial adoption.

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