



Training Workshop

Additionality Tests for CDM Project Activities

Paata Janelidze
janelidze@caucasus.net



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1. Definition of Additionality



Article 12.5 of the Kyoto Protocol

Emission reductions resulting from each project activity shall be certified by operational entities to be designated by the Conference of the Parties serving as the meeting of the Parties to this Protocol, on the basis of:

- (a) Voluntary participation approved by each Party involved;
- (b) Real, measurable, and long-term benefits related to the mitigation of climate change; and
- **(c) Reductions in emissions that are additional to any that would occur in the absence of the certified project activity.**



Modalities and Procedures for a Clean Development Mechanism

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



Interpretation of Additionality

First methodologies submitted to the Executive Board of CDM included two different interpretations of the definition of additionality in paragraph 43 of the CDM modalities and procedures:

Interpretation 1: without the ability to register under the CDM, the proposed project activity would be, or would have been, unlikely to occur. A baseline methodology evaluates a priori whether the project activity is the baseline scenario;

Interpretation 2: if the proposed CDM project activity is not implemented, a less GHG friendly activity would have been initiated or be continued instead. A baseline methodology does not evaluate a priori whether the project activity could be the baseline scenario.



Interpretation of Additionality(2)

- The second interpretation differs from the first in that it does not question whether or not the proposed CDM project activity would have gone ahead anyway.
- Not all projects that may appear to have positive GHG effects are additional. For example, for a project that is the result of legal or policy obligations it might be difficult to demonstrate additionality.



Recommendation of Meth Panel

- At its 6th meeting the Meth Panel recommended that the first interpretation should be the only one used.
- The Meth Panel also recommended that a new methodology should include a procedure to assess why the proposed CDM project activity is less likely to occur than one or more of the other possible scenarios and give illustrative examples of such procedures



Illustrative Examples of Additionality

- a) A flow-chart or series of questions that lead to a narrowing of potential project options; and/or
- b) A qualitative or quantitative assessment of different potential options and an indication of why the non-project option is more likely; and/or
- c) A qualitative or quantitative assessment of one or more barriers facing the proposed project activity (such as those laid out for small-scale CDM projects); and/or
- d) An indication that the project type is not common practice (e.g. occurs in less than [$<x\%$] of similar cases) in the proposed area of implementation, and not required by recent/pending legislation/regulations.



2. Additionality Tests for CDM Project Activities



Additionality Tests

Additionality tests are to be included in:

- Project Design Document (PDD);
- New Baseline Methodology (If PDD does not refer to approved methodology).



Project Design Document Form

CDM-PDD Version 02 (01.07.2004)

SECTION A. General description of project activity

A.4. Technical description of the project activity

A.4.4. Brief explanation of how the anthropogenic emissions of anthropogenic greenhouse gas (GHGs) by sources are to be reduced by the proposed CDM project activity, including why the emission reductions would not occur in the absence of the proposed project activity, taking into account national and/or sectoral policies and circumstances



Project Design Document Form

CDM-PDD Version 02 (01.07.2004) (2)

SECTION B. Application of a baseline methodology

- B.3. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity. **This section should include additionality test**



New Baseline Methodology Form CDM-NMB Version 01 (01.07.2004)

SECTION D. Explanation and justification of the proposed new baseline methodology

- D.3. Explanation of how, through the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario (section B.3 of the CDM-PDD)



3. Tool for the Demonstration and Assessment of Additionality



Tool for the Demonstration and Assessment of Additionality

- At its 16th meeting CDM EB approved “Tool for the Demonstration and Assessment of Additionality”
- Tool provides for a step-wise approach to demonstrate and assess additionality
- Tool provides a general framework for demonstrating and assessing additionality and is to be applicable to a wide range of project types. Particular project types may require adjustments to this framework, i.e. the Tool is not a manual or guideline and therefore project participants may propose other tools for the demonstration of additionality to the Executive Board for its consideration.



Tool for the Demonstration and Assessment of Additionality (2)

Steps of the Tool include:

- Identification of alternatives to the project activity;
- Investment analysis to determine that the proposed project activity is not the most economically or financially attractive;
- Barriers analysis;
- Common practice analysis; and
- Impact of registration of the proposed project activity as a CDM project activity.



Step 0. Preliminary Screening Based on the Starting Date of the Project Activity

If project participants wish to have the crediting period starting prior to the registration of their project activity, they shall:

- a) Provide evidence that the starting date of the CDM project activity falls between 1 January 2000 and the date of the registration of a first CDM project activity (only CDM project activities submitted for registration before 31 December 2005); and
- b) Provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. This evidence shall be based on documentation that was available to third parties at, or prior to, the start of the project activity.



Step 1. Identification of Alternatives to the Project Activity Consistent with Current Laws and Regulations

Sub-step 1a. Define alternatives to the project activity. These alternatives are to include:

- The proposed project activity not undertaken as a CDM project activity;
- All other plausible and credible alternatives to the project activity that deliver outputs and on services with comparable quality, properties and application areas;
- If applicable, continuation of the current situation (no project activity or other alternatives undertaken).



Sub-step 1b. Enforcement of Applicable Laws and Regulations

- The alternative(s) shall be in compliance with all applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.
- If the proposed project activity is the only alternative amongst the ones considered by the project participants that is in compliance with all regulations with which there is general compliance, then the proposed CDM project activity is not additional.



Proceed to Step 2 (Investment analysis) or Step 3 (Barrier analysis). (Project participants may also select to complete both steps 2 and 3.)



Step 2. Investment Analysis

Sub-step 2a. Determine appropriate analysis method

- If the CDM project activity (PA) generates no financial or economic benefits other than CDM related income, then apply the ***simple cost analysis***. Otherwise, use the ***investment comparison analysis*** or the ***benchmark analysis***.



Sub-step 2b. – Option I. Apply Simple Cost Analysis

- Document the costs associated with the CDM project activity and demonstrate that the activity produces no economic benefits other than CDM related income.
- ***If it is concluded that the proposed CDM project activity is not financially attractive then proceed to Step 4 (Common practice analysis).***



Sub-step 2b. – Option II. Apply Investment Comparison Analysis

- Identify the financial indicator, such as Internal Rate of Return (IRR), Net Present Value (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.



Sub-step 2b – Option III. Apply Benchmark Analysis

- Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision context.
- Identify the relevant benchmark value, such as the required rate of return (RRR) on equity.
- The benchmark is to represent standard returns in the market, considering the specific risk of the project type. Benchmarks can be derived from:
 - ✓ Government bond rates;
 - ✓ Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required), based on bankers views;
 - ✓ A company internal benchmark if there is only one potential project developer.



Sub-step 2c. Calculation and Comparison of Financial Indicators

- Calculate the suitable financial indicator for the proposed CDM PA and, in the case of Option II, for the other alternatives. Include all relevant costs and revenues (excluding CER revenues), and, as appropriate, non-market cost and benefits in the case of public investors.
- Present a clear comparison of the financial indicator for the proposed CDM PA and:
 - a) The alternatives, if investment comparison analysis is used. If one of the other alternatives has the best indicator (e.g. highest IRR), then the CDM PA can not be considered as the most financially attractive;
 - b) The financial benchmark, if benchmark analysis is used. If the CDM PA has a less favourable indicator (e.g. lower IRR) than the benchmark, then the CDM PA cannot be considered as financially attractive.



Sub-step 2d. Sensitivity Analysis

- Include a sensitivity analysis that shows whether the conclusion regarding the financial attractiveness is robust to reasonable variations in the critical assumptions. The investment analysis provides a valid argument in favour of additionality only if it consistently supports the conclusion that the project activity is unlikely to be the most financially attractive (as per sub-step 2c) or is unlikely to be financially attractive (as per sub-step 2c).



- *If after the sensitivity analysis it is concluded that the proposed CDM project activity is unlikely to be the most financially attractive (as per sub-step 2c) or is unlikely to be financially attractive (as per sub-step 2c), then proceed to Step 3 (Barrier analysis) or Step 4 (Common practice analysis).*
- *Otherwise, unless barrier analysis is undertaken and indicates that the proposed project activity faces barriers that do not prevent the baseline scenario(s) from occurring, the project activity is considered not additional.*



Step 3. Barrier Analysis

Sub-step 3a. Identify barriers that would prevent the implementation of type of the proposed project activity

- **Investment barriers**, other than the economic/ financial barriers in Step 2 above, *inter alia*:
 - ✓ Debt funding is not available for this type of PA
 - ✓ No access to international capital markets due to real or perceived risks
- **Technological barriers**, *inter alia*:
 - ✓ Skilled and/or properly trained labour to operate and maintain the technology is not available and no education/training institution in the host country provides the needed skill;



Step 3. Barrier Analysis (2)

- ✓ Lack of infrastructure for implementation of the technology.
- Barriers due to prevailing practice, *inter alia*:
- ✓ The PA is the “first of its kind”: No PA of this type is currently operational in the host country or region.
- 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 if it was not expected to be registered as a CDM activity.



Step 3. Barrier Analysis (3)

Sub-step 3 b. Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)

- If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM PA. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration. At least one viable alternative shall be identified.



- *If both Sub-steps 3a – 3b are satisfied, proceed to Step 4 (Common practice analysis)*
- *If one of the Sub-steps 3a – 3b is not satisfied, the project activity is not additional.*



Step 4. Common Practice Analysis

- The above generic additionality tests shall be complemented with an analysis of the extent to which the proposed project type has already diffused in the relevant sector and region. This test is a credibility check to complement the investment analysis or barrier analysis.

Sub-step 4a. Analyze other activities similar to the proposed project activity. Projects are considered similar if they are in the same country/region and/or rely on a similar technology, are of a similar scale, and take place in a comparable environment (regulatory framework, investment climate, access to technology, access to financing, etc.)



Sub-step 4b. Discuss any similar options that are occurring

- If similar activities are identified above, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially unattractive (as contended in Step 2) or subject to barriers (as contended in Step 3). This can be done by comparing the proposed PA to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially attractive or did not face the barriers to which the proposed PA is subject.



- *If Sub-steps 4a and 4b are satisfied, i.e. similar activities cannot be observed or similar activities are observed, but essential distinctions between the project activity and similar activities can reasonably be explained, go to step 5 (Impact of CDM registration).*
- *If Sub-steps 4a and 4b are not satisfied, i.e. similar activities can be observed and essential distinctions between the project activity and similar activities cannot reasonably be explained, the proposed CDM project activity is not additional.*



Step 5. Impact of CDM registration

- Explain how the approval and registration of the PA as a CDM activity, and the attendant benefits and incentives derived from the PA, will alleviate the economic and financial hurdles or other identified barriers and thus enable the PA to be undertaken. The benefits and incentives can be of various types, such as:
 - ✓ Anthropogenic greenhouse gas emission reductions;
 - ✓ The financial benefit of the revenue obtained by selling CERs;

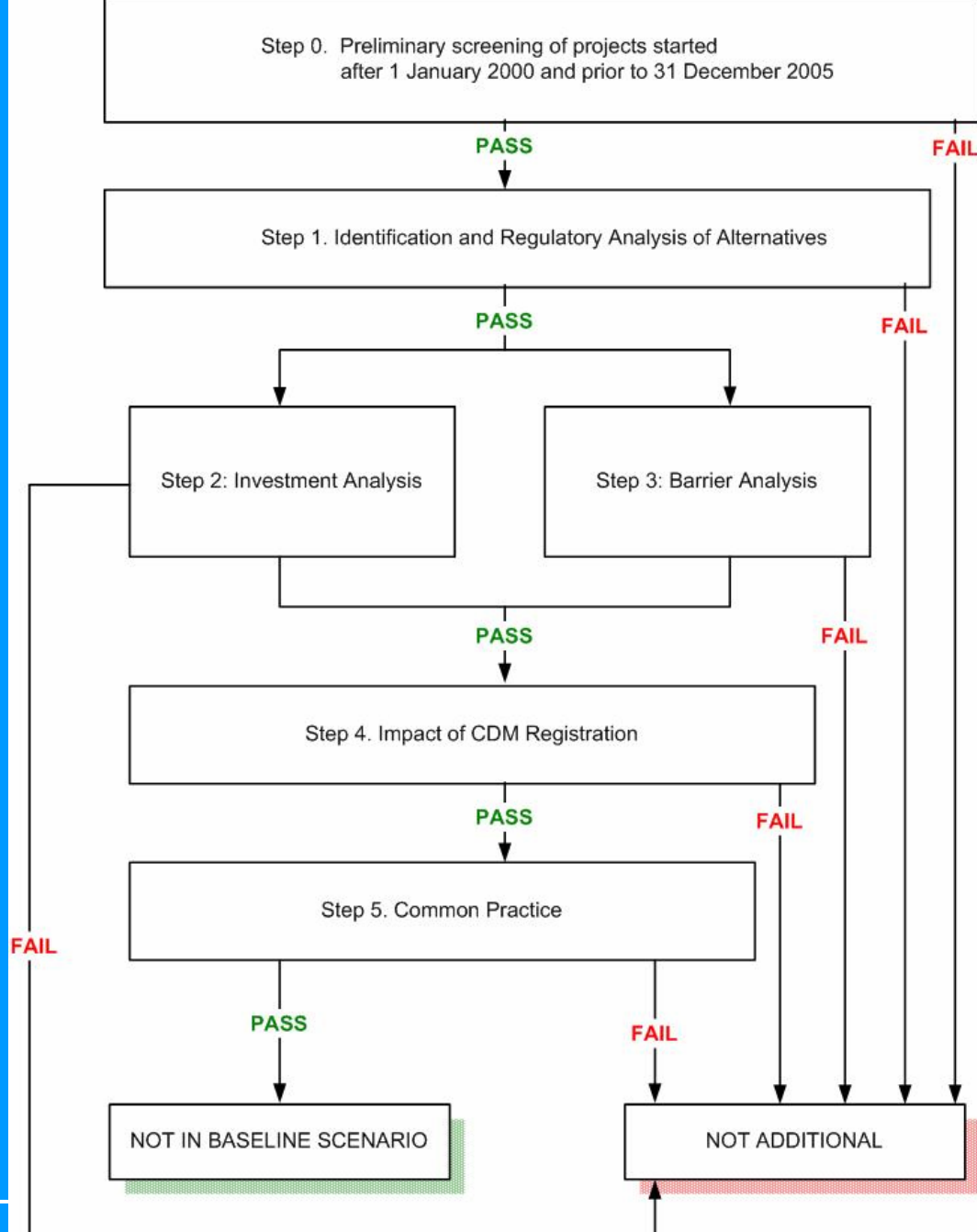


Step 5. Impact of CDM registration (2)

- ✓ Attracting new players who are not exposed to the same barriers, or can accept a lower IRR (for instance because they have access to cheaper capital),
- ✓ Attracting new players who bring the capacity to implement a new technology, and
- ✓ Reducing inflation /exchange rate risk affecting expected revenues and attractiveness for investors.



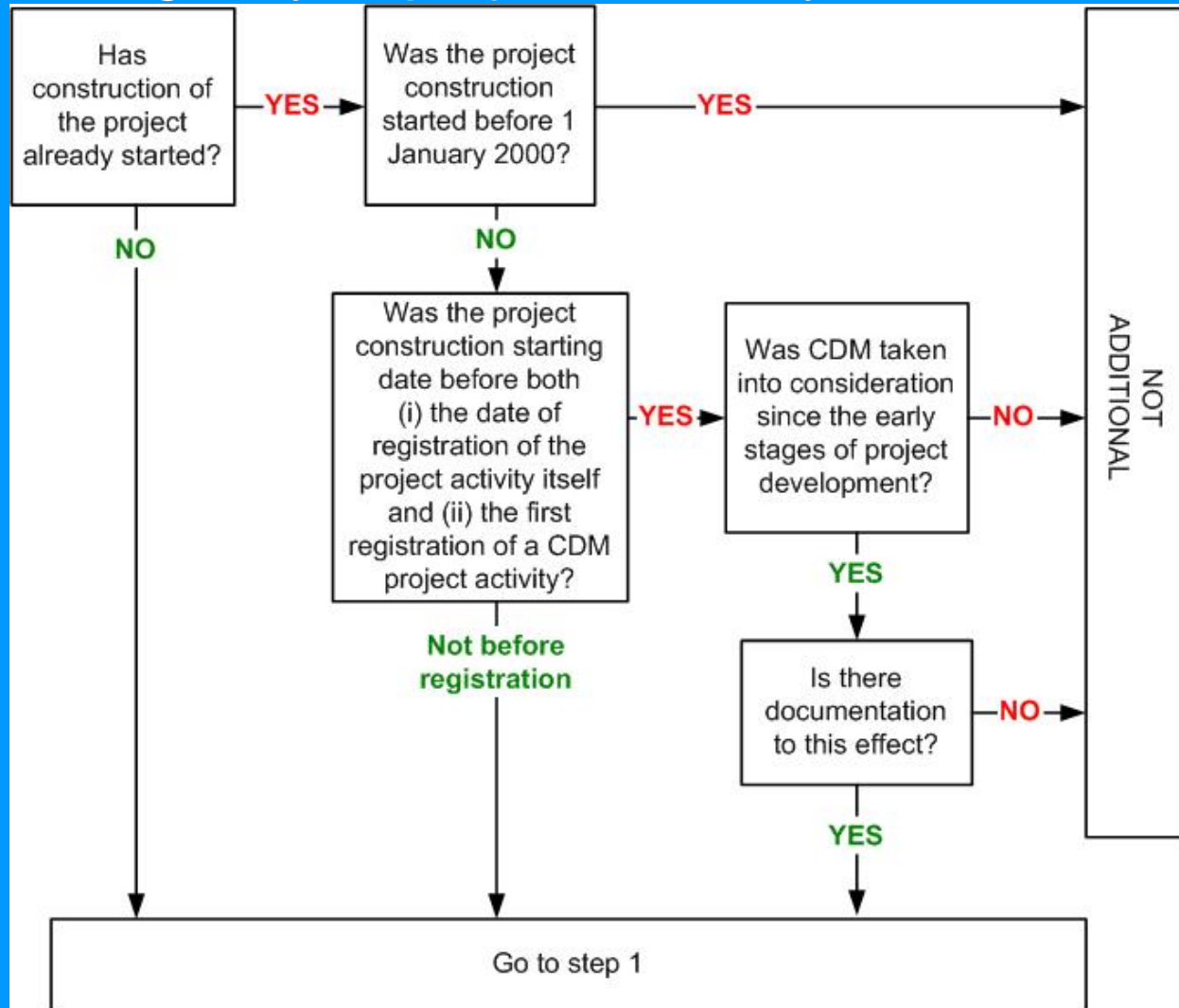
- *If Step 5 is satisfied, the proposed CDM project activity is not the baseline scenario.*
- *If Step 5 is not satisfied, the proposed CDM project activity is not additional.*



Flowchart
(1):
Additionality
Scheme



Flowchart (2): Scheme for demonstrating eligibility of projects already started





4. Additionality Test for A&R Projects



Additionality Test for A&R Projects

- **Afforestation** - Planting of new forests on lands that historically have not contained forests
- **Reforestation** - Replanting of forests on land that was previously forested but subsequently converted to other use
- Afforestation and reforestation projects use the same additionality test as described above. For example, ARNM0002 is using additionality test based on the “Tool for the Demonstration and Assessment of Additionality”



5. Additionality Test for Small-Scale CDM Project Activities



Small-Scale CDM Project Activities

- (i) renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent);
- (ii) energy efficiency improvement project activities that reduce energy consumption on the supply and/or demand side, by up to the equivalent of 15 GW hours per use;
- (iii) Afforestation or Reforestation projects that are expected to result in net human-induced greenhouse removals of less than 8 kt of CO₂ per year and are developed or implemented by low-income communities or individuals (as determined by the Host Country); or
- (iv) other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kt of carbon dioxide equivalent annually



Small-Scale CDM Project Activities (2)

TYPE I - RENEWABLE ENERGY PROJECTS

- I.A. Electricity generation by the user;
- I.B. Mechanical energy for the user;
- I.C. Thermal energy for the user;
- I.D. Renewable electricity generation for a grid



Small-Scale CDM Project Activities (3)

TYPE II - ENERGY EFFICIENCY IMPROVEMENT PROJECTS

- II.A. Supply side energy efficiency improvements –
T&D;
- II.B. Supply side energy efficiency improvements –
Generation;
- II.C. Demand-side programmes for specific
technologies;
- II.D. EE and fuel switching measures for industrial
facilities;
- II.E. EE and fuel switching measures for buildings;
- II.F. EE and fuel switching measures for agricultural
facilities and activities



Small-Scale CDM Project Activities (4)

TYPE III - OTHER PROJECT ACTIVITIES

III.A. Agriculture;

III.B. Switching fossil fuels;

III.C. Emission reductions by low-greenhouse emission vehicles;

III.D. Methane recovery;

III.E. Avoidance of methane production from biomass decay through controlled combustion



Additionality Test for Small-Scale CDM Project Activities

- A simplified baseline and monitoring methodology may be used for a smallscale CDM project activity if the project participants are able to demonstrate to a designated operational entity that the project activity would otherwise not be implemented due to the existence of one or more of the barriers listed in attachment A of appendix B of the “Simplified Modalities and Procedures for Small-Scale CDM Project Activities”



Additionality Test for Small-Scale CDM Project Activities (2)

- (a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;
- (b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;



Additionality Test for Small-Scale CDM Project Activities (3)

- (c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;
- (d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.



THANK YOU