CDM: Proposed new methodology expert form (version 04)

(To be used by methodology experts providing desk review for a proposed new methodology)

Name of expert responsible for completing and submitting this form	Jürg M. Grütter
Related F-CDM-NM document ID number	NM0128

Note to those completing this form, as applicable: Please provide recommendations on the proposed new baseline and monitoring methodologies based on an assessment of CDM-NMB and CDM-NMM and of their application in sections A to E of the draft CDM-PDD, desk reviews and public input. Please ensure that the form is entirely filled and that arguments and expert judgements are substantiated.

A. Evaluation of the proposed new methodologies by desk reviewers:

I. Evaluation of the porposed new baseline methodology:

Title of new baseline methodology:>> "Baseline methodology for modal shifting in industry for product/feedstocks"

i. Conditions under which this methodology is applicable to other potential projects (e.g. project type, region, data availability):

>>>>Only applicable as currently to the proposed project…as its in fact not a methodology and lacks core formulae for a methodology

No applicable if the current mode of transport is discontinued as baseline calculations rely on continuous monitoring of that data.

ii. Strengths and weaknesses of the methodology:

Strengths:

- If realized correctly potentially applicable to a wide array of projects and potentially fairly simple

Weaknesses:

1. Not a methodology but a project description. The methodology is a re-written project document and not a general applicable methodology. The expressions, formulaes are thus often project specific. To be acceptable the methodology requires a complete overhaul. The complete text is basically a project description and not a methodology and mixes continuously PDD elements with methodological issues.
2. No methodology how to identify the baseline is proposed.
3. The tool to determine additionality is not clarified nor further detailed.
4. Lacks core formulae: It is unclear how baseline and project emissions are related to the quantity transported.
5. Lack of clarity
6. Non-transparent considering exact information sources
7. Not general but project specific
8. Lacks a core element of mode-switch in freight transport: load-factor changes i.e. the question of the mode switch leads to more trips without cargo.
9. Is unclear respective to determination of fuel consumption and distance (round-trip vs. one-way).
10. National policies are not considered
11. Only applicable if current mode of transport continues as data vintage of baseline is not fixed. The methodology should rather establish a fixed baseline emission factor per mode of transport and use e.g. default technical improvement rates to remain conservative.

iii. Any changes needed to improve the methodology:

a. Minor changes:>>

b. Major changes:>>

- The proposed methodology needs a full overhaul and needs to be written as a methodology and not a simple project description.
- The identification of the baseline and how to determine additionality needs to be written from scratch as no sufficient proposal is made.
- The methodology needs clear formulaes and transparent data sources. Formulae to calculate total baseline emissions e.g. lack (only fuel emission factors are calculated and verbally it is mentioned that this needs to be correlated to the output).
- The methodology needs to clarify issues regarding load factor, consumption per km (averages taken)
- The methodology needs to be general and not project specific. This concerns the mode of transport, the fuels, the industrial scope and the data required.
- The methodology is currently only applicable if the existing mode of transport continues as only then is data available for that mode on a continuous mode as suggested by the methodology. This requirement is not necessarily. However a technological improvement factor would need to be inserted if baseline emission factors (specific consumption) are fixed ex-ante.

II. Evaluation of the proposed new monitoring methodology:

Title of new monitoring methodology: >> "Monitoring methodology for modal shifting in industry for product/feedstocks"

i. Conditions under which this methodology is applicable to other potential projects (e.g. project type, region, data availability):

>>Theoretically such a methodology would be widely applicable across sectors and regions. The proposed methodology is however project specific and in fact not applicable to other cases as currently written.

ii. Strengths and weaknesses of the methodology:

>> Strengths are none.

Weaknesses are:

- Project specific and not applicable in general. It is a project document basically and not a methodology
- IDs and what to monitor remains unclear
- Not specified how monitoring is realized
- No QA procedures proposed
- country and not methodology specific default values are taken

Additionally see problems of baseline methodology listed above.

iii. Any changes needed to improve the methodology:

a. Minor changes:>>

b. Major changes:>>Complete re-writing of proposal

B. Details of the evaluation of the proposed new methodology by the desk reviewer:

I. Proposed new baseline methodology *(specify title here):* >> "Baseline methodology for modal shifting in industry for product/feedstocks"

(1) Short description of the methodology, including an assessment of which approach from paragraph 48 of the CDM modalities and procedures was used:

a) Describe the methodology:

>>Basically the methodology is to compare baseline with project emissions when the mode of freight transport is changed. The emissions covered are all those originating in the different modes when transporting goods from A to B. Baseline and project emissions are calculated ex-post based on actual quantities transported.

b) State the approach selected:

>>48a: Existing actual or historical emissions

c) Indicate (in summary form) why the approach selected is the most appropriate. Please provide your expert judgement on the appropriateness of the selected approach to the project category:

>>The justification used in the baseline methodology document why 48b is not applicable is erroneous. The methodology must determine which alternatives are potentially viable and it cannot be pre-fixed that the only viable alternatives are the project or a continuation of current practices. 48b as well as 48c might be appropriate approaches as in any country there exist alternative transport modes to road transport (including train, ship). The project activity in reality is simply using non-road based freight transport. Due to existing data limitations and the complexity of comparing transport mode decisions of different actors usage of the approach 48a is however the most appropriate.

(2) Basis for determining the baseline scenario:

a) State whether the documentation explains how the baseline scenario is to be chosen and identified:

>>No. The methodology describes that the current way of transport is the baseline. A methodology however must provide the instruments to determine what would be the baseline. The descriptive text used indicates that road-transport would be the cheapest. This would constitute the ingredient for a methodology to determine the baseline. The methodology is also not specific for the pulp and paper industry. Using arguments in the methodology concerning this specific industry are thus misleading and do not constitute an element of a methodology.

b) State the basic underlying rationale for algorithms/formulae used (e.g. marginal vs. average basis) (see also section 4 below):

>>based theoretically on specific rates (output related emissions); fixed rates for baseline fuel consumption per unit;

c) State whether the documentation explains how, through the use of the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario. If so, what are the tools provided by the project participants?

>>The methodology refers to the EB additionality tool. Thereafter the methodology refers to a specific project explaining that this project is additional. This is not appropriate inside a methodology. The authors seemingly have not understood the difference between a methodology and a PDD.

d) State whether the basis for determining the baseline scenario and for assessing additionality is appropriate and adequate:

>>NO; neither the identification of the baseline nor how to assess additionality is explained. While using the EB tool for assessing additionality is appropriate further clarifications would be helpful. These lack. No methodology at all is proposed how to identify the baseline.

(3) Assessment of the description of the proposed methodology and its applicability

a) State whether the methodology has been described in an adequate manner:

>>In fact the proposal is simple. The methodology complicates the rather simple proposal making it difficult to understand. Also the continuous mixture of project specifics with methodological issues makes the description non-adequate.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMB):

>>The proposed project activity is a freight switch from road to ship. This would qualify for the proposed methodology if latter would be realized in an adequate manner.

c) State whether the application of the methodology could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity.

>>The methodology does not propose how to identify the baseline. The methodology simply assumes that current practices are the baseline. However the project (changing the transport mode) might well the more appropriate baseline scenario i.e. the methodology does not necessarily lead to the most probable baseline scenario.

Please explain:

>>The methodology does not describe how to determine the baseline but simply assumes that current practices are the baseline. In the PDD in the section on additionality project specific details are provided. Generalizing such factors might lead to a baseline methodology.

(4) Assessment of algorithms/formulae and type of data needed:

a) State whether the description of the methodology includes algorithms and generic formulae that can be applied to other potential project activities (if not, the proposed new methodology will be considered as a project-specific methodology):

>> The methodology is to project specific referring e.g. in D6 to trucks as baseline. This is not necessary. The methodology could be simply mode switch in freight from one mode of transport to another mode – latter being less GHG intensive. By relating the methodology to specific modes of transport it loses scope and becomes a project specific methodology.

Formulaes used are not generic but based on the project example in the PDD.

The methodology does not clearly state a formulae neither how to calculate finally baseline nor project emissions. While the text refers to emissions being adjusted to production levels no formulae is presented to show how this will be done concretely. In page 12 the methodology talks of "an adjustment factor" while in other parts a direct correlation to production levels is made. A clear cut formulae MUST be established. This is a CORE issue of the methodology. The baseline as well as project emissions of course need to be related to output levels. The methodology should establish a baseline emission factor per unit of output. Based on the units of output the absolute baseline emissions are then calculated during project implementation thus calculating the ERs.

b) Explain the spatial scope of data used to determine the baseline and whether the scope is appropriate:

>>transport from A to B. Appropriate. However it is unclear if round-trips are counted or one-way trips. This is a core issue and needs to be discussed in a methodology for mode switch.

c) Explain the vintage of data used (in relation to the duration of the project crediting period) and whether the vintage of data is appropriate, indicating the period covered by the data:

>>The methodology does not state the vintage of the data but refers to the project situation. Again a description of the project is made instead of establishing a methodology. For baseline data the vintage is unclear. If the project discontinues using the current mode of transport then it cannot measure current baseline emissions. It would thus need to fix a baseline emission factor for the project period. The methodology however states that it continues measuring the emissions of the current mode of transport i.e. the methodology would only be applicable in cases where the company continues using the new and the old mode of transport to have data on both modes. This reduces however very much the applicability scope of the methodology. The methodology should rather establish a fixed baseline emission factor per mode of transport and use e.g. default technical improvement rates to remain conservative.

(5) Definition of the project boundary related to the baseline methodology:

a) State how the project boundary is defined in terms of:

i) Gases and sources

>>CO2, CH4 and N2O

ii) Physical delineation

>>area where transport is made excluding upstream emissions

b) Indicate whether this project boundary is appropriate:

>>OK

(6) Key assumptions/parameters (including emission factors and activity levels) and data sources:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>>*1.* The methodology assumes that no other alternatives exist except continuation with road transport and the project alternative.

2. Fixed default parameters for CH4 and N2O are assumed

3. The current mode of transport continues (data is derived on a continuous base from latter)

b) State whether the key assumptions are arrived at in a transparent manner:

>>No other alternatives are discussed and it is unclear on what the assumption is made.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

➢ >>Fixed CH4 and N2O parameters per fuel consumed are used. CH_4 emissions are a function of the fuel and engine type, and any post-combustion controls. N_2O emissions are technology based for each fuel type, vehicle category, installed control technologies and local data such as average driving speeds, temperatures, and altitude. Average default factors can be used as their impact overall is small. However the methodology should clearly identify the appropriate default values and state the accepted information sources. For CH4 and N2O the referenced IPCC guidelines give various values depending on the fuel efficiency, control technologies, vintage and country of origin. The methodology must state how the default value is obtained.

d) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

>>Not sufficiently clear (e.g. CH4 and N2O). Data source in general is cited but not specific enough.

e) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>>In general OK.

f) State possible data gaps:

1. The methodology does not state if round-trips shall be used. This is an important factor that the methodology should establish. Some modes of transport might e.g. only be used for specific types of goods. Trucks e.g. might transport for one company goods from A to B and for another company other goods from B to A. Accounting for return trips would thus not be valid. On the other hand if trucks return empty as no other cargo is available or the units cannot handle other products then the project needs to account for return-trip emissions. A mode-switch from (flexible, small) trucks to (large, inflexible) barges might e.g. mean that for trucks other goods are found for the return trip not so however for barges. For former only one-way fuel consumption would thus need to be accounted for and but for latter return-trip consumptions. The methodology needs to address this aspect.

2. The methodology does not state how the fuel consumption of specific modes of transport are obtained. While this is more or less clear in the presented project the methodology should establish a procedure to measure either the fuel consumption or how to establish alternatively a default factor. Especially for barges and river as well as sea-transport also the average consumption should be based on return trips even if the

barge transports other commodities the other way round as fuel consumptions down the river are much lower than counter-current. To account only for one way would be misleading as the ship/barge is obliged to return again to take on the load.

3. If the methodology would use fixed baseline emission rates then it would need to incorporate a technology improvement rate to remain conservative.

(7) Assessment of uncertainties:

a) State whether the methodology includes an assessment of uncertainties regarding:

i) The basis for determining the baseline scenario:

>>None is made

ii) Algorithms/formulae:

>>None made

iii) Key assumptions:

>>None made

iv) Data:

>>None made

b) State whether the uncertainties presented are reasonable:

>>The key problem is data reliability concerning fuel consumption and to a minor extent specific fuel consumption (per unit of product). This uncertainty is also related to load factors of specific transport modes (see former chapters). The data uncertainty problems are not addressed by the methodology. Again the methodology refers to the project proposal in this part instead of identifying potential uncertainties and addressing them.

(8) Leakage:

a) State how the baseline methodology addresses any potential leakage due to the project activity:

>>Leakage addressed is fuel transported to the plant (if relevant).

b) Indicate whether the treatment for leakage is appropriate and adequate:

>>OK. Upstream leakage would be negative (increase emission reductions of project) if fuel savings occur. Not including these is thus a conservative approach.

(9) Transparency and "conservativeness":

a) Indicate whether the baseline methodology was developed in a transparent way:

>>No. The methodology is basically a project description and lacks the core conceptual elements of a methodology.

b) State whether the baseline methodology is conservative:

>>Difficult to judge as its not really a methodology. The problems of round-trips and load factors are not addressed. Apart from latter the methodology is potentially conservative.

(10) Potential strengths and weaknesses of the proposed baseline methodology *(please explain)*:

Strengths:

- If realized correctly potentially applicable to a wide array of projects and potentially fairly simple

Weaknesses:

- Not a methodology but a project description..
- No methodology how to identify the baseline is proposed.
- The tool to determine additionality is not clarified nor further detailed.
- Lacks core formulae (relation to output)

- Lack of clarity
- Non-transparent considering exact information sources
- Not general but project specific
- Lacks a core element of mode-switch in freight transport: load-factor changes i.e. the question of the mode switch leads to more trips without cargo.
- Is unclear respective to determination of fuel consumption and distance (round-trip vs. one-way).
- National policies are not considered
- Only applicable if current mode of transport continues as data vintage of baseline is not fixed. The methodology should rather establish a fixed baseline emission factor per mode of transport and use e.g. default technical improvement rates to remain conservative.

(11) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account *(please explain)***:**

>>are not taken into account. The methodology states that national policies are taken into account due to using a historical approach. This is misleading. National policies might have e.g. prescribed that companies need to change their mode of transport to keep operating leaving them an adjustment time. The methodology should state clearly how national policies need to be considered.

(12) Applicability of the proposed methodology across project types and regions *(please indicate)***:**

>>Potentially a freight modal switch methodology would be widely applicable over all sectors where goods are transported and all regions. The proposed methodology is however a project description and as only applicable to a very limited amount of projects.

(13) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>>

b) Indicate any further comments:

>>

II. Proposed new monitoring methodology *(specify title here):* >> "Monitoring methodology for modal shifting in industry for product/feedstocks"

In respect of the proposed new monitoring methodology, evaluate each section of CDM-NMM to the draft CDM-PDD. Please provide your comments section by section:

(1) Brief description of new methodology:

Describe new methodology:

>>Basically the methodology establishes that baseline as well as project emissions are continuously measured. This implies that the old mode of transport continues to< operate however with a lower intensity.

(2) Key assumptions/parameters:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>>1. Data is available and collected.

2. The methodology implies that the company continues using the current mode of transport (ID 2 of baseline emissions). This is often not the case as companies change their mode of transport for specific products completely.

b) State whether the key assumptions are arrived at in a transparent manner:

>>First yes, 2nd is implicit

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>>1st OK with appropriate QA/QC procedures. 2nd assumption is not necessary if baseline methodology would be adjusted.

(3) Data sources and data quality:

a) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

>>1. Fuel consumption baseline and project mode of transport (proprietary, measured)

2. Quantity of product transported (proprietary, measured) for project and baseline emissions

3. Heating values and specific weight of fuels from Brazil

4. Emission factors for CO2, CH4 and N2O from IPCC

The methodology has the same type of data for ID 2, 4 and 4 in project emissions. In comments examples of differences are given.

b) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> It is unclear what the IDs 2-4 of project emissions are used for and how they enter the calculation. The methodology should not be a project description. It is also unclear if ID 1 from project emissions is the same as ID 1 of baseline emissions (quantity of tons transported).

The methodology should not take the fuel values from a specific country but indicate that "national values or in case of absence IPCC default values" should be taken referring to which data source would be accepted. Again the text is project based and not a general methodology.

c) S*tate possible data gaps:*

>> various data gaps exist – these are however due to baseline methodology gaps (see above).

(4) Assessment of the description of the proposed methodology and its applicability:

a) State whether the proposed methodology has been described in an adequate manner:

>>NO. It is not clear what data is measured, nor how data is used or how formulaes are applied. The text supplied is a project description and not a monitoring methodology. In no part is stated e.g. how the fuel consumed is actually to be monitored.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMM):

Potentially applicable to the proposed project activity. The methodology presented is however more or less a copy-paste of the PDD and thus the assessment of "applicability" is limited.

c) State whether this proposed monitoring methodology is compatible with the proposed baseline methodology described in CDM-NMB of the draft CDM-PDD:

>>yes

(5) Leakage *(please elaborate, if appropriate)***:**

>>not required by the methodology

(6) Quality assurance and control procedures *(please explain)***:**

>>No procedures are explained. The text states simply that QA will be realized. The issue is however that the methodology should state how QA is assured in the context of this specific methodology.

(7) Potential strengths and weaknesses of the proposed monitoring methodology *(please explain)***:**

>>Strengths are none.

Weaknesses are:

- Project specific and not applicable in general. It is a project document basically and not a methodology

- IDs and what to monitor remains unclear
- Not specified how monitoring is realized
- No QA procedures proposed
- country and not methodology specific default values are taken

Additionally see problems of baseline methodology listed above.

(8) Applicability of the proposed methodology across project types and regions *(please indicate)*:

>>Theoretically such a methodology would be widely applicable across sectors and regions. The proposed methodology is however project specific and in fact not applicable to other cases as currently written.

(9) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>>

b) Indicate any further comments:

>>

Signature of desk reviewer

Dr. Jürg M. Grütter

Date: 06/09 /2005

Information to be completed by the secretariat	
F-CDM-NMex doc id number	
Date when the form was received at UNFCCC secretariat	
Date of transmission to the Meth Panel and EB	
Date of posting in the UNFCCC CDM web site	