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Page 1/13
Subject **Call for inputs on the reasons for no or low application of approved methodologies in CDM project**

Dear Mr. de Jonge,

The Project Developer Forum (PD Forum) warmly welcomes the opening of the above call for inputs by the Executive Board at its 47th meeting. The PD Forum sees this as a key issue hindering the efficient running of the CDM, as already raised in our response to the previous call for input into the efficiency of the CDM process.

The current call for input asks separately about reasons for difficulty in application of low/no use methodologies and about general difficulties in applying other methodologies. In the experience of PD Forum members this distinction is arbitrary and many of the reasons for methodologies having fewer than 5 projects currently applied also hold true for more commonly used methodologies that would be even more widely applied if these problems could be solved. Despite this observation the PD Forum has divided its response between issues facing low/no use methodologies (with fewer than 5 projects in the pipeline) and issues relating to other more widely used methodologies, according to the three questions posed by the Secretariat. In each case examples are used to highlight points made.

Within each section a number of specific recommendations have been made in bold type within the text. **Underlying many of these recommendations is the principle that when the Meth Panel would like to propose changes to methodologies, more extensive consultation with Project Participants should be sought to ensure that all relevant issues are fully explored prior to decisions being taken. To highlight this suggestion, we have put forward the outline of a proposed new procedure for the methodology revision process. This is included as an annex to this letter.**

1. Reasons for low or no application of the approved methodologies (including methodologies for large-scale, small-scale and aforestation & reforestation CDM project activities).

There are a number of reasons for low application of the highlighted methodologies.

a) Changes made during the methodology approval process that result in the methodology being too specific and often applicable to only one project, or even none at all

This is a very common problem and has been found by Project Developers to be the reason for low/no use of **at least** the following methodologies:

Meth	Title	Validation	Registered	Total
AM0019	Renewable energy projects replacing part of the electricity production of one single fossil fuel fired power plant that stands alone or supplies to a grid, excluding biomass projects	0	0	0
AM0038	Methodology for improved electrical energy efficiency of an existing submerged electric arc furnace used for the production of SiMn	0	1	1
AM0043	Leak reduction from a natural gas distribution grid by replacing old cast iron pipes or steel pipes without cathodic protection with polyethylene pipes	1	0	1
AM0055	Baseline and Monitoring Methodology for the recovery and utilization of waste gas in refinery facilities	1	0	1
AM0068	Methodology for improved energy efficiency by modifying ferroalloy production facility	0	0	0
AM0077	Methodology for recovery of gas from oil wells that would otherwise be flared and its delivery to specific end-users	0	0	0
AM0079	Recovery of SF6 from Gas insulated electrical equipment in testing facilities	0	0	0

It is apparent from these examples that in some cases even the original project for which the methodology was designed has not achieved successful registration. Often this has occurred because the Meth Panel has required the methodology to be heavily revised during the approval process.

Taking one example in detail, AM0055 is simply not viable in most refinery situations.

- The methodology requires that flare gas is taken from a single point so that there can be no possibility of 'diversions of recovered gas flow'. This raises two points:
  - If some of the gas is diverted it would not generate CERs or revenues for the project, and given the capped CER volume that can be claimed surely this can only ever have the impact of decreasing what is claimed through CDM.
  - For a single point to be used this would have to be at the flare gas header. This is extremely dangerous as the gas is at too low pressure and mixing with air in too high

quantities may not be avoidable. This can cause explosions, not just in the project facility, but back up in the refinery itself if the pressure imbalances cause suction back down the pipes. In reality, a refinery operations team would not sanction a CDM project under this methodology due to serious safety concerns.

- Three years of historical flare gas measurement data are required (as with the alternative methodology ACM0012). The reasons for this requirement are sound in principle. Under the methodology there are alternatives available for the calculation of flare gas but they have complications. We have assessed a number of refineries, and have found that those that are flaring the most are also less efficient and lacking good records. The historical measurements are supposed to prevent gaming, but for a refinery this is simply not plausible. A tonne of oil is worth $500, which may produce 3 tonnes of CO2 when used, which might be worth $45 in total. No refinery would ever produce additional flare gas in order to generate CERs; it would be economically suicidal.
- For refineries that don't have flare gas flow data there is a calculation method which can be used under ACM12 as an alternative. However, under certain conditions a comparison to original manufacturer specification is required and again this is totally inappropriate for a refinery. They are bespoke, highly complex systems, built to produce minimum waste gas. Over decades of use, with changing processes, new equipment incorporations and altered product balances they no longer resemble 'manufacturer's specification'.
- Substituting ACM12 for AM55 has other issues, which leave flare gas projects at oil refineries extremely difficult to implement. The biggest of these is that future changes in flare gas volumes could impact the project. The requirements under the methodology to characterize the flare gas exactly and to forbid future changes rule out any refinery flare gas projects. **It is proposed that a simple, conservative maximum in the baseline should be sufficient.**

The follow-on issue of the uncertainty around applicability is that the financing decision cannot be made by counterparty and CDM financier until a project has been at least validated, because of the level of uncertainty around success rate in validation / registration, as if it fails in validation it will not be financially viable. This can delay the start of projects by up to a year or more. For these highly restrictive methodologies, it is no longer viable to start capital intensive projects before validation / registration approval because of the risk of failure to obtain CDM registered status.

Recommendation: the Meth Panel should endeavour above all to approve methodologies that can be applied to many projects. The specific situation and monitoring technologies of the project submitted with the proposed methodology should not be used as the Meth Panel's sole basis for judging methodology design.

b) Mandatory leakage calculation techniques that cannot be carried out in practice, but which are unlikely to have material impact on the project's emissions reductions

This problem also often stems from changes made during the approval process. Before the methodology is approved, the Meth Panel sometimes makes requirements for further procedures to be added to leakage calculations in order to be further sure that the methodology is conservative. In some cases these extra procedures are not workable in practice and the whole methodology becomes unusable purely because of a push to be extra conservative over project leakage.

Two examples of this are as follows:

Meth	Title	Validation	Registered	Total
AM0047	Production of biodiesel based on waste oils and/or waste fats from biogenic origin for use as fuel	2	0	2
AM0049	Methodology for gas based energy generation in an industrial facility	2	0	2

In the case of AM0047, the requirement is to annually monitor the availability and demand of waste oil/fat used by the project in a radius around the plant representing a maximum distance travelled to get this raw material. However, if the radius is extended over hundreds of kilometres, it is not feasible to get data on total amount (quantitative data) of waste oil/fat available and its demand in the entire radius around the plant. This becomes even more difficult since waste oil/fat generation and its use are generally not very organised sectors. In our opinion methodology should be more flexible and practical in procedures to determine leakage.

Recommendation: The 'Voluntary Gold Standard Methodology for Biodiesel from waste oil/fat from biogenic origin for use as fuel' is a working example of a methodology that provides a more practical method to determine leakage. Please note that this methodology has not been formally released as a Gold Standard VER methodology as yet but would be very helpful to inform CDM developments of AM0047 in future.

In **AM0049**, the methodology approval process led to two distinct procedures for calculating leakage and a number of conditions to decide on which of the two procedures should be used. The default approach, which is more conservative, should be used in place of the marginal approach if four conditions cannot be shown to be met. This in itself is a reasonable approach and aims to ensure that excess emissions reductions are not certified. However, the default approach that was added by the Meth Panel during approval is NOT workable in practice due to the data requirements and the complexity of the industrial plants involved. Furthermore, the set of conditions that must be met before the marginal approach can be followed are too strict and are not reasonable given the economic conditions and priorities of the country that this methodology is specific to, South Africa.

Both projects currently in validation are therefore in a stalemate situation where they are both ready for validation but are blocked because they cannot calculate leakage according to the methodology requirements; the marginal approach would be workable but is forbidden because of the conditions imposed, and the default approach cannot be calculated. This problem has already been the subject of a revision that addressed the unreasonable nature of the conditions imposed. Unfortunately this revision was not approved by the meth panel and the PPs suspect that the Panel did not have sufficient time to fully consider the implications of the requests made.

Recommendation: changes made by the Meth Panel, during both the approval and revision processes, should be subject to increased consultation with the PPs involved to ensure that all the issues have been fully explored and understood.

c) Technical methodologies for methane emissions are either too conservative or too burdensome on project participants

Methane emission calculations have proved to be over burdensome in a number of methodologies, with examples from the low/no use methodology category and from methodologies that have been used but whose use has been limited.

Two examples from the low/no use category are as follows:

Meth	Title	Validation	Registered	Total
AM0041	Mitigation of Methane Emissions in the Wood Carbonization Activity for Charcoal Production	0	1	1
AMS-III.K.	Avoidance of methane release from charcoal production by shifting from traditional open-ended methods to mechanized charcoaling process	0	2	2

It is noted that effectively only one project has been registered under AMS III.K; the project #1463 was registered, then withdrawn and reregistered as #2364. For AMS-III.K, although one project for open-pit technology has been registered the procedures stipulated for calculating the methane emission factor for brick-based charcoal making process are too expensive for the majority of project circumstances, especially smaller projects that are very sensitive to project costs. This rather defeats the object of having a small-scale methodology. Furthermore the monitoring requirements to measure the amount of methane generated, fuelled or flared using continuous flow meters at every project kiln are prohibitively expensive for many projects.

Recommendation: the emissions factor calculation for methane from brick-based charcoal making should be simplified to be more appropriate for small scale projects, for example to mimic the method for open-pit technologies. The monitoring requirements should be changed to allow for sampling.

d) Applicability conditions preclude application to the majority of potential activities that have been identified

In this case, PPs have attempted to find more project activities to fit a preapproved methodology but in each case they have discovered that applicability conditions are too specific to be practically applied in most project situations. Therefore the methodology remains underused. Two clear examples of this are AM0055 and AM0058

Meth	Title	Validation	Registered	Total
AM0058	Introduction of a new primary district heating system	5	0	5

For **AM0058**, although five projects are currently in the validation pipeline, the number of potential projects is greatly restricted by the applicability criteria. The greatest potential for this project type is in China, where some planned projects would use heat supplied from relatively new power stations. Others would be developed in conjunction with a new power station. In a country where 80,000 - 90,000 MW of new coal capacity is being added per year it is difficult to grasp why projects that propose to use recently built or new coal capacity more effectively are excluded from CDM finance.

Recommendation: methodologies, especially those that are quite specific to a country or region, should include country-specific provisions that fine tune their applicability to the national context.

2) Barriers or difficulties faced by the stakeholders for the application of methodologies, in general, and not limited to the methodologies with no/low use.

As mentioned above, many methodologies that have been used more than five times and so do not fall in to the low/no use category still suffer from similar problems to those described above.
Problems experienced have been divided into three categories, with some methodologies featuring in more than one category

2.1) Overly specific requirements in methodologies

Some methodologies are overly specific in stipulating the use of tools or certain technology types or calculation methods. Three examples follow:

a) Overly specific requirement to use certain approved tools

Certain methodologies are very specific about which of the approved Tools should be used to select baseline scenarios and prove additionality. An example is ACM0006, "Consolidated methodology for electricity generation from biomass residues", which stipulates that the combined tool to identify baseline scenario and demonstrate additionality must be used. However this is only applicable if all the alternatives to the project are in control of the project participants. For certain projects this is not the case, even if all the applicability criteria of the methodology are met. An example is the use of purchased biomass residues which are not under the control of the project participant. Further, the methodology needs to have provisions for evaluating a baseline scenario for purchased biomass residues because the "combined tool" cannot be used for reasons explained above. Purchased biomass residues by project activities do not violate any applicability condition of ACM0006 version 8. One of the possible and conservative baseline scenarios can be deemed as use of purchased biomass for energy generation in plant identified as baseline scenario for the project. This plant can be located on-site or at other sites.

Recommendation: Methodologies should not be specific about which approved tools can be used. In this case, the "Tool for demonstration and assessment of additionality" should be allowed for projects applying ACM0006.

b) Requirement to use specific technology or measurement techniques that may not be most efficient

In these cases, methodologies are very specific about technology types and monitoring techniques that may not be the most appropriate in all cases. Some project activities cannot be registered because they do not fit the technology stipulated in the methodology.

One example is AM0025, Avoided emissions from organic waste through alternative waste treatment processes, when used with projects applying specific waste treatment technology.

In the project activity in question, a municipal solid waste treatment facility is using waste sorting technology to separate inert components for land filling, separating combustible material for use as RDF and to use controlled hybrid biological process to treat the biodegradable fraction of waste so that biogas and compost is obtained from the biodegradable component. The hybrid technology uses a bioconversion process, which is a patented biological process converting organic content of MSW into compost and biogas which uses a Distributive Control System (DCS) to ensure optimum conditions during aerobic and anaerobic phases.

As per the methodology, "during the composting process, aerobic conditions are neither completely reached in all areas nor at all times. Pockets of anaerobic conditions – isolated areas in the composting heap where oxygen concentrations are so low that the biodegradation process turns anaerobic – may occur. The emission behaviour of such pockets is comparable to the anaerobic situation in a landfill. This is a potential emission source for methane similar to anaerobic conditions which occur in unmanaged landfills".

According to the methodology AM00025, project methane emissions from composting are required to be calculated by first calculating what proportion of waste degrades under anaerobic conditions within the wider aerobic process. This must be done using a concerted monitoring campaign to continuously measure oxygen content around the facility.

In the proposed bioconversion process, the aeration system is managed during the aerobic process by a Distributive Control System (DCS) that monitors the oxygen levels inside the vessel via an in-line gas analyzer that continuously samples the process inside the sealed vessel from 6-ports. The DCS activates the addition of air when oxygen levels fall below a predefined set-point.

This is a technical solution to avoid methane emissions through careful management; if any methane is released, it will be flared. The methodology currently excludes such a project because it does not involve monitoring of oxygen levels. In this case a revision may be required but in the general case methodologies should strive to allow for the best technological solutions at the time of approval.

Recommendation: allow further technological flexibility in methodology design to avoid subsequent need for lengthy and expensive revisions.

Another example of a specific required technological process is **ACM0014, mitigation of greenhouse gas emissions from treatment of industrial wastewater**. Although 13 projects are in the validation pipeline using this methodology, none have been able to achieve registration.
The methodology proposes two methods for estimation of methane emissions from open lagoons, but both of them are a hindrance to successful project implementation:
- MCF method: An error in one formula (equation 7) of the MCF method leads to drastic underestimation of emission reductions.
- ORR method: The determination of sedimentation ratio poses a significant burden on PPs.

For the MCF method a request for revision has been submitted (AM_REV_0139) to correct the erroneous formula, but the revision was rejected at EB47. This is another example where it appears that a revision has been rejected without full appreciation of the issues concerned. The proposed correction was compared with a number of other techniques including the ORR method from the same methodology, the previous method from AM0022 and the method from the small-scale methodology AMS-III.H. In all cases the revised method appears consistent with other techniques. The current error leads to drastic underestimation of emission reductions (up to more than 50%).

Recommendation: Methodology revision requests should be thoroughly discussed through consultation with PPs prior to decisions being taken.

For the ORR method, it is considered that Organic Removal Ratio method allows the loss of COD through anaerobic routes to be more accurately quantified through site-specific quantification of COD losses. These anaerobic routes include aerobic decomposition, oxidative decomposition and sedimentation. To determine COD losses through pond sedimentation, the project participant is required to carry out sedimentation tests in accordance with the procedure stipulated in Appendix II of ACM0014 for two consecutive years prior to the project implementation. This requirement poses a significant burden on project participants since very few wastewater treatment facilities conduct sedimentation tests as normal business practice before project implementation. It is also impractical to carry out the test for two years from the time the project participant decides to proceed with the

CDM. Alternative methods could be used to determine the sedimentation ratio (an alternative approach has already been proposed in a request for clarification: AM_CLA_0078).

Recommendation: In cases where a new technique comes to light after the original methodology was approved, the revision process should allow a more streamlined correction process with full consultation with the PP involved.

2.2) Errors and inconsistencies in methodologies.

Although many of these errors have since been corrected, they are listed here to highlight that errors do regularly occur and that greater interaction during the approval process may reduce the incidence of such problems.

ACM0001: Inadvertent omission during revision by the Meth Panel drastically reduced applicability

In Version 7 of the methodology omission of a sentence meant that closed landfills (those not receiving new waste) could not use the meth. Nevertheless this version was approved and came into force on 02/11/2007. Version 07 was replaced on 14/12/2007 after stakeholders pointed out the error via an unsolicited letter to the EB.

ACM0006: Contradiction in meth applicability between scenario descriptions and equations

The scenarios are quite complicated, and sometimes contradictory. For example until Version 07, Scenarios 4, 11, 13, 14, 18, and 19 required that, “The efficiency of heat generation is smaller or the same after the implementation of the project activity;” however, later in the methodology there were equations to calculate emission increases due to displacement of heat to address projects where this was not the case. As a result of this of this contradiction it was not clear whether or not the methodology applied in such cases, and interpretation varied from project to project.

ACM0012: Errors and ambiguities inhibit application of Version 1 of the methodology

The methodology was consolidated from ACM0004, AM0032 and three proposed methodologies and was meant to cover waste gas, heat & pressure recovery but did not consistently refer to waste energy types; thus it was often unclear if a section referred to one, two or all of the eligible waste energy types. The inconsistency was especially notable for the parameter "fcap", the equation for which was written with waste gas in mind (units of Nm3), and as such it could not always be applied to projects using other energy types. Following a request for clarification on this issue, many of these problems were addressed in Version 3; however the Version 3 approved at MP33 contained one serious error in an equation that would have caused emission reductions to be calculated incorrectly; this was corrected after stakeholders pointed out the error via an unsolicited letter to the EB.

ACM0014: Inconsistencies and errors inhibit application of Version 1 of the methodology

When the methodology was consolidated from AM0013 and AM0022 it contained inconsistencies and errors mainly related to the naming of parameters and formulae as well as the information contained within the tables of parameters. Stakeholders noted this while trying to apply version 1 and in response filed a request for clarification (AM_CLA_0074) with a list of the issues that had been identified. Version 02 of the methodology addressed most of the concerns.

AMS Methodologies: Inconsistencies

Many of the small scale methodologies also contain errors and inconsistencies after they undergo major revisions by the SSC WG, for example AMS III.H Version 9. It is too time consuming for project participants to deal with every inconsistency as a request for clarification or deviation so some inconsistencies remain and must be dealt with on a project by project basis.

Recommendations:

(1) Enable more time for drafting and reviewing by the Secretariat to support the minimal time that Meth Panel and SSC WG members have available

(2) Hold a public comment period on new consolidated methodologies, small scale methodologies developed or significantly revised by the SSC WG, new Tools and Tool revisions, before they come into force. It might be possible to reduce the number of requests for clarification by engaging project participants to review and comment upon these methodologies prior to their publication.

2.2) Difficulty in interpreting methodology requirements.

ACM0006: Specificity of scenarios inhibits meth application to projects

A biomass energy project deviated from ACM0006 Version 06 scenario 16 because the existing unit(s) were and would continue to be co-fired with fuel oil and the co-firing amount was to decrease somewhat following implementation of the project. The project was initially submitted to validation under the CDM, but was then withdrawn from validation and registered under VCS instead. Under VCS a deviation to increase the accuracy of data was used to obtain a conservative emission reductions calculation given the slight deviation. Under CDM, approval of the same deviation would have required a time intensive process with uncertain results.

AMS I.B: Unclear methodology applicability caused rejection/withdrawal of projects

The applicability conditions of AMS I.B Version 8 were unclear and open to interpretation. This caused the rejection of the project Uruba Renewable Irrigation Project due to differences in interpretation. The Guaxuma Renewable Irrigation Project, using the same methodology, was then withdrawn since it would have faced the same problem. It is the opinion of the project participants that both projects could have been registered under the most recent version of that methodology.

Recommendation: Methodology Deviations related to increasing the accuracy of data should be acceptable in principle. This would empower DOEs to reasonably interpret methodologies, rather than having to request clarification or deviation for minor issues. Further it would reduce the workload for the EB, Secretariat, Meth Panel and SSC WG.

3) Barriers or difficulties faced with the methodologies, in general, for the periods of monitoring and during the crediting period.

Problems encountered with application of monitoring methodologies during the crediting period have been grouped into four distinct categories with examples for each.

3.1) Monitoring requirements are found to be too impractical or prohibitively expensive to be put in to practice

a) One example of a methodology whose monitoring plan poses difficulties during the crediting period is AM0047, production of biodiesel based on waste oils and/or waste fats from biogenic origin for use as fuel,

- Monitoring of project parameters of biodiesel produced, biodiesel consumed, methanol consumed, and glycerol produced and amount of waste oil/fat

The applied methodology requires continuous monitoring of biodiesel produced, methanol consumed and glycerol produced. This assumes a continuous production process and monitoring has to be carried out by installing continuous flow meters. It is not possible to install

continuous flow meters due batch type process at several bio diesel production facilities. In our opinion methodology should devise measures to allow wider application to both batch and continuous production processes. Stock measurement method should be included as an alternative method

- ***Monitoring for stationary usage by large and diverse customer base***

The methodology allows 100% biodiesel blend for stationary usage. But if the stationary customer base is large and diversely located, it becomes unfeasible to monitor each and every customer (for e.g. large numbers of farmers may use biodiesel produced by a project activity in their stationary agricultural pumps and gensets in remote rural area). The methodology could be more flexible and practical in procedures to monitor this kind of use.

Recommendation: The 'Voluntary Gold Standard Methodology for Biodiesel from waste oil/fat from biogenic origin for use as fuel', can be approached, when it is publicly released by the Gold Standard and it is recommended that this Gold Standard methodology be used as an example for CDM in order to make AM0047 more usable throughout the crediting period.

b) ACM0010 (Consolidated methodology for GHG emission reductions from manure management systems) is a consolidation of AM0006 and AM0016 but its monitoring methodology is overly complex with seemingly arbitrary deductions for uncertainty.

During the 22 month period that AM0006 and AM0016 were available for use, 49 project activities were registered. These projects have yielded in excess of 100 issuances. Conversely, only three projects have been registered under consolidated ACM0010 since its release in September 2006 and none of the three projects have been issued CERs.

In the same timeframe, September 2006 to the present, 127 projects were registered using, AMS III.D. which is the Small Scale Methodology which covers the same sectoral scope and similar applicability to ACM0010. In March 2008, the EB approved version 14 of the AMS III. D. which mirrors monitoring requirements of ACM0010. No projects have been registered under this latest version of the methodology in the 16 months since its release.

The key issues which deter project developers from using either ACM0010 or AMS III.D. Version 14, are based on complex, costly, and manpower intensive monitoring requirements and deep deductions for uncertainty. For example:

- Project sites require a statistically justified sampling procedure in addition to the monthly requirements for physically weighing the animals and recording the data by animal classification. Verification of the accuracy of the sampling protocol and the accuracy of the actual weights recorded require considerable record keeping. Many livestock sites do not allow entrance of off-site personnel to the production facilities due to animal health concerns. Therefore the producer would be required to weigh all the animals monthly which is highly unlikely.
- While there are many subtle changes in ACM0010, the two technical/scientific revisions representing the most significant departure from their predecessors are:
    - A new modification for the Methane Conversion Factor (MCF) used in equation 2 as described in Section C on page 9 that is not supported by any documentation from the IPCC or the literature. Arbitrarily assigning an MCF value of 0 for average annual temperatures of 5C or less effectively eliminates the use of ACM0010 in many temperate areas of the world and linear interpolation of MCF between 5 and 10 degrees severely reduces the baseline emissions for most temperate areas, and

- The second point of contention is the default application of 15% biogas leakage from the anaerobic digester. This value is at the upper end of the IPCC default spectrum of 5%-15%. Those defaults were compiled in 1996 using data primarily from digesters built in developing countries and digesters built for landfill applications. The US-EPA AgStar program has experienced 0% leakage and attributes leakage to flaws in design and construction. ACM0010 does not provide any criteria for assessing and justifying leakage values below 15%. For example, pressure differentials, mass balance of system, and the measurement of methane production and combustion can be used to more accurately ascertain leakage from the anaerobic digester if any leakage exists.

3.2) Ambiguities in monitoring requirements lead to verification or issuance delays or failure

ACM0001: An ambiguity in the Monitoring Methodology led to varied interpretations, eventually provoking rejection of issuance requests. An ambiguity existed in all versions of the methodology up to and including Version 8. Page 15 of the Monitoring Methodology read:

> "The amount of landfill gas generated (in m³, using a continuous flow meter), where the total quantity ($LFG_{total,y}$) as well as the quantities fed to the flare(s) ($LFG_{flare,y}$), to the power plant(s) ($LFG_{electricity,y}$), sent to pipeline for feeding to the natural gas distribution network ($LFG_{PL,y}$), and to the boiler(s) ($LFG_{thermal,y}$) are measured continuously."
> *and*
> "The fraction of methane in the landfill gas ($w_{CH4,y}$) should be measured with a continuous analyzer **or, alternatively,** with periodical measurements, at a 95% confidence level , using calibrated portable gas meters and taking a statistically valid number of samples **and accordingly the amount of land fill gas** from $LFG_{total,y}$, $LFG_{flare,y}$, $LFG_{electricity,y}$, $LFG_{PL,y}$ and $LFG_{thermal,y}$ **shall be monitored in the same frequency**" (our emphasis).

Project participants, when applying versions 1 through 8 of ACM0001, interpreted the second quotation from ACM0001 as saying: where the fraction of methane in landfill gas is measured periodically, the amount of gas should be monitored in the same frequency (i.e. periodically).
The stated interpretation was written into the monitoring plans of the PDDs that applied versions 1 through 8.1 of ACM0001 that were approved by both the DOEs and EB as complying with the monitoring methodology.
The Monitoring Methodology as prescribed under ACM0001 Version 9 made it clear that gas amount must always be monitored continuously. However, this was ambiguous in the methodology text of versions 1 through 8 stated that either continuous or periodical measurement of gas amount was permitted, which was supported by DOE and EB approvals of PDDs.
The ambiguity has caused Requests for Review at issuance, Rejection of issuance requests and withdrawal of issuance requests by project participants.

Recommendation: Monitoring requirements from a later version of a methodology should not be applied to projects developed under earlier versions of the methodology. Where the EB is of the opinion that monitoring requirements have always existed in methodologies and were only unclearly described, guidance on how to monitor existing projects should be published and specified to apply to issuance requests for monitoring periods that begin after the date of publication of the guidance. This will provide stakeholders the opportunity to change their monitoring equipment, but will not penalize those that were following the version of the methodology under which they were registered.

3.3) Inconsistencies between Methodologies and Tools lead to verification delays or failure

ACM0001 and the "Tool to determine project emissions from flaring gases containing methane": A measurement requirement for the same parameter was treated inconsistently between the two procedures, while the methodology referred directly to the Tool.

> An inconsistency between the Monitoring Methodology of ACM0001 and the "Tool to determine project emissions from flaring gases containing methane" existed since the methodological tool was adopted (EB28). Page 3 in footnote and pages 7 and 8 of the Monitoring Methodology of ACM0001 read: "Methane fraction of the landfill gas to be measured on **wet** basis."
> whereas
> Page 9 of the "Tool to determine project emissions from flaring gases containing methane" read: "the volumetric fraction of methane in the residual gas (fvCH4,RG,h) […] in the same reference conditions (normal conditions and **dry or wet** basis)."

Therefore there was an inconsistency between the monitoring methodology and the methodological tool which caused difficulties in interpreting which procedure had priority of importance. This led to discussions at verification between project participants and DOEs that caused delays. For example two clarification requests were submitted seeking guidance on this matter.

Recommendation: Establish clear priority of importance between documents that provide procedures for the same action. Ensure that documents that refer directly to one another are not inconsistent using careful reviews prior to adoption of new procedures.

3.4) Requirements that are not included in the methodology are applied nevertheless during the crediting period

ACM0002: Projects applying ACM0002 were requested during verification to deduct emissions from backup diesel gen sets, although the methodology does not require this and the PDD did not describe monitoring of this parameter. This caused a great deal of delay. Emissions from this source have been explicitly excluded from Version 10 of the methodology.

Recommendation: Requirements should only be introduced into methodologies via the formal channels, which are limited to methodology revisions considered by the Methodologies Panel.

We trust that these specific examples of general problems will be useful in helping to overcome the issue of underused methodologies in CDM. There is a significant impact on project development due to the restrictions that CDM places on project developers, to the point that they question whether a project will actually be possible. Counterparties in emerging markets are quickly losing interest as the restrictions of the system are explained to them and their ideas for incorporating a project in their facility are ruled out one by one as the applicability criteria of methodologies are worked through. The outcome is that in many cases projects are not considered worthwhile by counterparties and emissions are left unabated.

We would be delighted to provide further information through discussion with the UNFCCC Secretariat should the PD Forum be invited to do so.

Yours sincerely,

Martin Enderlin
Chair of the PD Forum

Subject **Call for inputs on the reasons for no or low application of approved methodologies in CDM project**

ANNEX – Proposed Methodology Revision procedure

Step (1):
PP submit revision of methodology to UNFCCC Secretariat

Step (2):
Secretariat passes to Meth Panel to appoint review team and interact with PP to clarify background to revision and inform PP of potential weaknesses of the submission

Step (3):
PP will be given opportunity to revise proposed revision and submit final revision proposal for evaluation in Meth Panel meeting

Step (4):
PP will be provided opportunity to provide telephone number and to be on stand-by during meth panel meeting to clarify any issues that may be unclear.
Meth Panel evaluates revision during meth panel and provides initial approval / rejection of the revision.

Step (5):
In case of rejection PP will be provided 2 weeks to respond to reasons for rejection (similar to RfR procedure).
Head of Meth Panel will evaluate (if necessary in consultation with Meth Panel members) whether concerns of the meth panel have been adequately addressed. If so, Meth Panel will submit revision to EB for final approval.