REPORT OF THE TWENTY - FIRST MEETING OF THE METHODOLOGIES PANEL
UNFCCC Headquarters, Bonn, Germany
6 - 9 June 2006

I. RECOMMENDATIONS BY THE METHODOLOGIES PANEL TO THE EXECUTIVE BOARD

A. Opening of the meeting and adoption of agenda

1. The Chair of the Methodologies Panel (Meth Panel), Mr. Rajesh Kumar Sethi, opened the meeting.

2. The Chair thanked the outgoing members Ms. Jane Ellis for her outstanding work and dedication and welcomed the new member of the Meth Panel, Mr. Juerg Fuessler who was selected by the Board at its twenty fourth meeting. The Meth Panel recommends that, for the purpose of continuity of methodological work, Ms. Jane Ellis be invited to attend the twenty second meeting of the Meth Panel.

3. The Chair adopted the agenda as proposed.

B. Consideration of proposed new methodologies

4. The Meth Panel considered the proposed new methodologies for the following cases as well as desk reviews and public inputs received, where applicable.

5. The final recommendations provided by the Meth Panel are made available on the UNFCCC CDM website: The final recommendations, proposed by the Meth Panel for the consideration by the Executive Board at its twenty-fifth meeting, are made available on the UNFCCC CDM website: http://cdm.unfccc.int/methodologies/PAmethodologies/publicview.html.

6. In accordance with the procedures for submission and consideration of a proposed new methodology, project participants may submit, via the DOE, technical clarifications to preliminary recommendations. Preliminary recommendations for which project participants have not provided any clarifications within the 4 week consultation period shall be considered as a final recommendation, forwarded to the Executive Board and will be made available at the same website as above (paragraph 5).

7. The Meth Panel agreed on the following recommendations:

Cases	**MP 21[1] recommendation**
NM0105-rev: *Bus Rapid Transit System for Bogotá, Colombia: TransMilenio Phase II to IV,* contained in annex 1	**A**
NM0107-rev: *Waste Gas-based Cogeneration Project at Alexandria Carbon Black Co., Egypt,* contained in annex 2	**A**

[1] Recommendations to the methodologies from the twenty first meeting of the Meth Panel, where A (recommended for approval), B (recommended for revision) and C (recommended for non-approval) are final recommendations to the Board.

Cases	MP 21[1] recommendation
NM0108-rev: *Biodiesel production and switching fossil fuels from petro-diesel to biodiesel in transport sector - 30 TPD Biodiesel CDM Project in Andhra Pradesh, India*	**Preliminary recommendation**
NM0110-rev: *Mitigation of Methane Emissions in the Charcoal Production of Plantar, Brazil*	**Work in progress[2]**
NM0118-rev: *The model project for renovation to increase the efficient use of energy in brewery*	**C**
NM0123-rev: *Substitution of raw material in cement processing,* contained in annex 3	**A**
NM0133-rev: *Grid-connected power generation project using biomass fuel from newly developed dedicated plantations, in Nakhon Ratchasima Province, Thailand*	**Work in progress**
NM0134-rev: *Paramonga CDM Bagasse Boiler Project*	**Preliminary recommendation**
NM0138-rev: *American Israel Paper Mill (AIPM) Natural Gas Cogeneration*	**Preliminary recommendation**
NM0141: *Displacing grid/off-grid steam and electricity generation with less carbon intensive fuels in Aba, Nigeria*	**B**
NM0143: *Catalytic reduction of N2O inside the ammonia burner of the nitric acid plant at Fertilizers & Chemicals Ltd., Israel,* contained in annex 4, along with a comparison table for NM0143, NM0164 and the recommended methodology, included in annex 5	**A (with elements of NM0164 incorporated)[3]**
NM0150: *Ghana efficient lighting retrofit project*	**B**
NM0152: *Celpa, Celtins and Cemat grid connection of isolated systems CDM Project*	**B**
NM0154: *Vikram Cement (VC): Energy efficiency improvement by up-gradation of preheater in cement manufacturing*	**B**
NM0155: *Waste gas utilisation for steam and power generation at RIL Jamnagar refinery*	**Work in progress**
NM0156: *Shanghai Putuo District Municipal Solid Waste Transfer and Comprehensive Treatment Plant*	**C**
NM0157: *Open-DSM type CDM for Green Lighting in Shijiazhuang city, China*	**C**
NM0158: *Mexico, Insurgentes Avenue Bus Rapid Transit Pilot Project*	**C**
NM0159: *Implementation of an Efficiency Testing, Consumer Labelling and Quality-Assurance Program for Air Conditioners in Ghana*	**Preliminary recommendation**

[2] The deliberations on these methodologies could not be concluded at the twenty first meeting of the Meth Panel. These cases will be considered at the following meeting before providing a recommendation to the Board.

[3] The cases NM0143 and NM0164 are similar methodologies proposing to use the same technology (secondary destruction of nitrous oxide emitted as a byproduct of nitric acid production). To improve the clarity of NM0143, certain elements of NM0164 were used, which included (i) nomenclature, (ii) a diagram of baseline determination and (iii) the definition of design capacity.

Cases	MP 21[1] recommendation
NM0160: *Shell Cogeneration Project*	**Preliminary recommendation**
NM0161: *Mondi Gas Turbine Co-generation in Richards Bay, South Africa*	**Preliminary recommendation**
NM0162: *Reduction in GHGs emission from primary aluminium smelter at Hindalco, Hirakud India*	**Work in progress**
NM0163: *Use of calcined ashes and fluorite for clinker production in the Cement Plant of Huichapan, Mexico*	**Preliminary recommendation**
NM0164: *Sasol Nitrous Oxide Abatement Project*	**A (incorporated into NM0143)**
NM0165: *Feed switchover from Naphtha to Natural Gas (NG) at Phulpur plant of IFFCO*	**Preliminary recommendation**
NM0166: *JISL biomethanation of biodegradable waste for thermal applications*	**Preliminary recommendation**
NM0167: *The White Tiger Oil Field Carbon Capture and Storage (CCS) project in Vietnam*	**Not graded[4]**
NM0168: *The capture of the CO2 from the Liquefied Natural Gas (LNG) complex and its geological storage in the aquifer located in Malaysia*	**Not graded**

C. Clarifications and requests for revisions of approved methodologies

8. The Meth Panel considered the following requests for clarifications and requests for revisions related to the application of approved baseline and monitoring methodologies. The requests submitted and the recommendations provided by the Meth Panel are made publicly available on the UNFCCC CDM web site at http://cdm.unfccc.int/methodologies/PAmethodologies/Clarifications and http://cdm.unfccc.int/methodologies/PAmethodologies/Revisions respectively. The requests for clarifications and or revisions that led to a recommendation by the Meth Panel to revise an approved methodology are reflected in section D below.

Clarification number	Approved Methodology	Title of the clarification	MP 21 recommendation.
AM_CLA_0025	ACM0003	"Clarification on biomass residues"	**Not accepted (see para 12)**
AM_CLA_0026	ACM0004	Guidance on the applicability of the treatment of additional gain in sensible heat due to combustible elements of waste gas	**Not accepted**
AM_CLA_0027	ACM0009	Applicability to projects in the district heating sector	**Accepted (see para 14)**

[4] Please see paragraph 22 of the report of the twenty third meeting of the Executive Board. The qualitative assessments are available on the UNFCCC CDM website.

AM_CLA_0028	ACM0001	Clarification on requirements for monitoring landfill gas flows in projects where only flaring occurs	**Accepted**
AM_REV_0009	AM0019	Revision to apply to renewable energy projects replacing part of the electricity production of more than one fossil fuel fired power plant	**Not accepted**
AM_REV_0010	AM0014	Modification of an applicability condition of the methodology to allow the cogeneration system to be owned or operated by the consuming facility that receives the project heat and electricity	**Accepted**
AM_REV_0011	AM0022	Amendment to allow for flaring-only of biogas	**Accepted (see para 10)**
AM_REV_0012	ACM0001	Alternative approaches to monitoring flare efficiency and the use of thermal-mass flow meters	**Not accepted**
AM_REV_0013	ACM0006	Amendment of ACM0006 by adding a new scenario	**Not accepted**

D. Revisions of approved methodologies

9. **AM0014:** The Meth Panel recommended the revision of the methodology to expand the applicability conditions. Presently, the methodology is applicable to projects where the cogeneration plant supplying energy to an industrial facility is owned and operated by a third party. The methodology is now applicable to situations where the cogeneration plant supplying energy to an industrial facility is established within and owned by the industrial unit. The revised version of the methodology is contained in annex 6.

10. **AM0022:** In response to a request for revision, the Meth Panel recommended the revision of the methodology to expand its applicability to allow for situations where flaring of the captured methane occurs and also to address other issues. Presently, the methodology is applicable only to projects where the captured methane is used for energy and/or electricity generation. The Meth Panel also clarified the procedure for estimating the baseline heat and electricity consumption at the facility where the gas capture and utilization project activity is implemented. The revised version of the methodology is contained in annex 7.

11. **ACM0001**: The Meth Panel recommended the revision of the methodology to allow the use of one measurement point for land fill gas (LFG) captured, if the captured LFG is flared only and not used for energy and/or electricity generation, provided that the flow meter is periodically calibrated by an officially accredited entity. Furthermore, the methodology was revised to provide a default value for methane destruction flare efficiency (50%) should the methane destruction efficiency not be measured. The revised version of the methodology is contained in annex 8.

12. **ACM0003**: As a result of a request for clarification the Meth Panel recommended to revise the methodology to clarify that the methodology excludes biomass residue types in cases where the preparation of biomass residue for use in the project plant may be associated with significant GHG emissions that are not addressed in the methodology. The revised version of the methodology is included as annex 9.

13. **ACM0008:** The Meth Panel recommended the revision of the methodology to clarify that the default value of 50% for methane destruction flare efficiency should be used if it is not measured. The current methodology allows for the use of a default ex-ante methane destruction flare efficiency of 99% for enclosed flares. The revised version of the methodology is contained in annex 10.

14. **ACM0009:** In response to a request for clarification, the Meth Panel recommended the revision of the methodology to expand its applicability conditions to include fuel switches in heat-only boilers in the district heating sector. The methodology is presently applicable to fuel switch only, from coal and/or petroleum fuel to natural gas, in industrial facilities. The revised version of the methodology is contained in annex 11.

15. **AM0006 and AM0016:** The Board, at its twenty fourth meeting, specifically requested the Meth Panel to revise the approved methodologies AM0006 and AM0016 to include the monitoring of flares for consideration by the Board at its twenty-fifth meeting. The Meth Panel recommends the following revision to the approved methodologies, as contained in annexes 12 and 13 respectively. The revisions recommended by the Meth Panel included:

(a) A default value of 50% methane destruction flare efficiency was provided to allow for situations where the monitoring of methane destruction flare efficiency is not undertaken. In situations where the methane destruction flare efficiency is monitored, the measured value shall be used for estimating the amount of methane destroyed. Furthermore, AM0006 was revised to use the value of the monitored flared methane and / or the measurement of methane generated to estimate the emissions reductions.

(b) Annual methane conversion factor (MCF) estimated by the methodologies should not exceed values given in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

(c) The Meth Panel noted that further revisions of the approved methodologies AM0006 and AM0016 may occur, based on public comments and expert advice.

E. Response to deviations

16. **Electricity generation projects resulting in emissions reductions in another non-Annex I country:** The Meth Panel discussed the issue of renewable electricity generation projects that result in a reduction of GHG emissions in another non-Annex I country via the export of electricity. The Meth Panel was of the view that the approved methodology to address renewable electricity generation project activities (ACM0002) is not applicable to such projects. It addresses only situations where the CDM power plant is located within the grid where the electricity generated by the proposed project is displaced. The approved baseline and monitoring methodology has no procedures to identify the grid to which the power is exported, or to certify the actual power delivered to the identified grid consuming the power. The Meth Panel also noted that the approved methodology as available requires the DNA to define the grid boundaries and in a situation of an international grid or export to another country's grid, all the DNAs concerned would have to provide an approval of grid boundary definition used by the project participants, which may require all DNAs in an international grid to agree upon a consistent grid definition.

17. Meth Panel recommends that either project participants submit a new methodology or a request for revision to deal with cases where a power plant is likely to deliver power to a grid of

another non-Annex I country via long-distance transmission lines and where the grid to which power will be delivered may vary over time due to market and contractual considerations.

18. **Flare monitoring and methane destruction efficiency measurement in methane avoidance projects:** The Meth Panel took note of submissions on the issue of the methane destruction flare efficiency measurements and suggestions for alternative methods of monitoring the methane destruction flare efficiency. The Meth Panel was of the view that methane destruction flare efficiency is a function of temperature of flare, residence time of gas and the turbulence (or wind conditions). Therefore, temperature alone cannot be used as a proxy for flare monitoring the methane destruction efficiency, as it is not precise enough to calculate the emission reductions incurred.

F. Consolidation of waste gas based cogeneration project methodologies

19. The Meth Panel considered a number of proposed new methodologies for the use of waste gas/heat for cogeneration to displace energy sourced from either high carbon fossil fuels in cogeneration or separate sources of electricity and heat production.

20. Despite the approval of case NM0107-rev, which is for project activities where waste gas based cogeneration is established, at the facility where waste gas is generated, and the energy is exported to user(s) who otherwise would use fossil fuel sources for energy, the Meth Panel recommends that all cogeneration based waste gas/heat methodologies be consolidated as the differences between them are not significant enough to warrant separate methodologies.

G. Draft baseline selection tool and additionality tool

21. As requested by the Board at its twenty-fourth meeting, the Meth Panel prioritized its work by considering an expert proposal on the merging of the latest version of the "Tool for the demonstration and assessment of additionality" (additionality tool) and the draft baseline decision tool, taking into account improvements as provided in the public inputs.

22. The Meth Panel agreed that further work was required to take into account the analysis of the use of additionality tool in projects, which have been registered or requested registration before finalizing its recommendation to the Board. The Meth Panel shall finalize its proposal at its twenty-second meeting in order to provide a recommendation to the Board at its twenty-sixth meeting, and requests the Chair of the Panel to brief the Board on the progress of the issue.

H. Double-counting

23. Taking into account the issues raised by the Board at its twenty fourth meeting on the recommendation by the Meth Panel concerning double counting in blended biofuel methodologies, the Meth Panel considered a proposal to address double counting. The Meth Panel agreed it will further work on this proposal with a view to providing a recommendation to the Board at its next meeting.

24. The Meth Panel also recognized that the issue of double counting may be addressed at two levels namely; (i) proactively by defining procedures that aim to limit the risk of double counting before the risk materializes by restricting the eligibility of claiming credits to certain actors; and (ii) by defining procedures to address and prevent double counting when the risk materializes before CERs are issued.

I. Carbon dioxide capture and storage

25. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, at its first session (COP/MOP1) requested the Executive Board to consider proposals for new methodologies for carbon dioxide capture and storage (CCS) as clean development mechanism project activities with a view to making recommendations to the COP/MOP at its second session, on methodological issues, in particular, with regards to project boundary, leakage and permanence.

26. The Board further clarified, at its twenty third meeting, that the Meth Panel shall consider all relevant methodologies, with the possibility to invite technical clarifications from project participants, to provide to the Board a qualitative assessment that the Board shall use to prepare its recommendation on methodological issues related to CCS as CDM project activities, in particular on boundary, permanence and leakage for consideration by COP/MOP at its second session.

27. The Meth Panel considered the relevant cases NM0167 and NM0168 and prepared a qualitative recommendation, which is available on the UNFCCC CDM web site website. In addition to examining the specific methodology elements of NM0167 and NM0168, the Meth Panel prepared a report containing common technical/methodological and policy/legal issues that arose from these methodologies with suggested ways to proceed, as contained in annex 14. The Meth Panel also requested further guidance from the Board in this regard.

J. Revision of forms and guidelines

28. The Meth Panel agreed to recommend the revision of the desk review forms (F-CDM-NMex_3d and 2d), recommendation form (F-CDM-NMmp), public input form (CDM-NMpu) and the CDM-PDD form and its guidelines (Guidelines for completing CDM-PDD, CDM-NM), in order to reflect the structure of new baseline and monitoring form approved by the Board at its twenty fourth meeting as well as to improve the guidelines for completion of the CDM-PDD. The revised forms are contained in annexes 15, 16, 17, 18, 19 and 20 respectively.

29. In its revision of the Guidelines for completing F-CDM-PDD and F-CDM-NM, the Meth Panel also included a number of aspects related to monitoring requirements.

30. The Meth Panel requested that the new F-CDM-NM form be used by the project participants submitting technical clarifications to the preliminary recommendations made by the Meth Panel at this meeting.

K. Definition of terms for CDM project activities under a programme of activities

31. In response to the request by the Board at its twenty fourth meeting to provide a tabulation of issues for preparing a definition of terms, the Meth Panel discussed issues relevant to “project activities under a programme of activities”, as referred to in decision 4/CMP.1. The Meth Panel noted that this decision text could be interpreted in different ways and, therefore, requests policy guidance from the Board on issues related directly to methodologies currently under consideration by the Meth Panel. For example, whether project activities undertaken as part of a programme designed to implement a mandatory national energy-efficiency standard are eligible under the CDM, which is relevant for the assessment of a proposed new methodology NM0159 (Implementation of an Efficiency Testing, Consumer Labeling and Quality-Assurance Program for Air Conditioners in Ghana).

32. The Meth Panel compiled a table of issues for which policy-level and methodological-level guidance is requested, as contained in annex 21.

L. Guidance on uncertainties in emissions reduction estimates

33. As agreed at its last meeting the Meth Panel considered a discussion paper on the issue of uncertainty in the estimation of emissions reductions. It identified that guidelines would need to be developed for the following issues (i) the acceptable limit of uncertainty, (ii) on how to reduce uncertainty and (ii) the quantification of uncertainty. The Meth Panel also agreed that the approach to be used in addressing and quantifying uncertainty should focus on key parameters in estimating the emissions reductions. The Meth Panel agreed to continue its work in this regard with a view to prepare a proposal at its next meeting.

M. Guidance document on monitoring requirements in the CDM-PDD and CDM-NM

34. As agreed at its twentieth meeting the Meth Panel further worked on the development of information on monitoring to be included in CDM-PDD and CDM-NM, which included standards for measurement, information on calibration procedures and procedures to address situations when measuring instruments are non-functional. The Meth Panel agreed to continue its work in this regard with a view to prepare a proposal for guidance at its next meeting.

N. Postponed agenda items

35. The Meth Panel postponed the following agenda items to the next meeting due to lack of time: (i) The issue of the use of IPCC carbon emission values for fuels; (ii) Proposal on issue on leakage from replacement of old equipment; (iii) Interpretation of the 1st paragraph of the "Procedures for the revision of an approved baseline or monitoring methodology by the Board during second commitment period"; (iv) Revision of AM0025 to incorporate AM0012; and (v) consideration of CDM projects in the estimation of emissions factors.

O. Roster of experts

36. The Meth Panel noted the satisfactory completion of the desk reviews undertaken for proposed new methodologies considered at the meeting as well as the desk reviews considered for submissions submitted under round 14.

P. Schedule of meetings and rounds of submissions of proposed new methodologies

37. The Meth Panel confirmed that its twenty-second meeting will be held from 4 - 8 September 2006, comprising of five formal days.

38. The Meth Panel noted that the deadline for the next round of submissions of proposed new methodologies is to be 5 October 2006. The Meth Panel reminded project participants that baseline and monitoring methodologies can be submitted at any time prior to this deadline.

Annexes to the twenty first meeting of the Meth Panel

Annex 1: Draft reformatted baseline and monitoring methodology based on NM0105-rev

Annex 2: Draft reformatted baseline and monitoring methodology based on NM0107-rev

Annex 3: Draft reformatted baseline and monitoring methodology based on NM0123-rev

Annex 4: Draft reformatted baseline and monitoring methodology based on NM0143

Annex 5: Comparison table for cases NM0143 and NM0164 vis-à-vis the draft recommended methodology based on these cases.

Annex 6: Draft revision to approved baseline methodology AM0014

Annex 7: Draft revision to approved baseline methodology AM0022

Annex 8: Draft revision to approved consolidated baseline methodology ACM0001

Annex 9: Draft revision to consolidated approved baseline methodology ACM0003

Annex 10: Draft revision to consolidated approved baseline methodology ACM0008

Annex 11: Draft revision to consolidated approved baseline methodology ACM0009

Annex 12: Draft revision to approved baseline methodology AM0006

Annex 13: Draft revision to approved baseline methodology AM0016

Annex 14: Draft recommendation on the common technical/methodological and policy/legal issues from the carbon dioxide capture and storage methodologies.

Annex 15: Draft revision of the desk review form (F-CDM-NMex_3d)

Annex 16: Draft revision of the desk review form (F-CDM-NMex_2d)

Annex 17: Draft revision of the recommendation forms (F-CDM-NMmp)

Annex 18: Draft revision of the public input form (CDM-NMpu)

Annex 19: Draft revision of the CDM-PDD form

Annex 20: Draft revision of the Guidelines for completing CDM-PDD, CDM-NM

Annex 21: Issues related to implementing “project activities under a programme of activities

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