REPORT OF THE NINTH MEETING
OF THE SMALL-SCALE WORKING GROUP

UNFCCC Headquarters, Bonn, Germany
19 - 23 March 2007

RECOMMENDATIONS BY THE SSC WG TO THE EXECUTIVE BOARD

A. Opening of the meeting and adoption of the agenda

1. The Chair of the Small Scale Working Group (SSC WG), Ms. Ulrika Raab opened the meeting.

2. The agenda was adopted as proposed, with three formal and two informal meeting days.

B. Revision of the simplified modalities and procedures for small-scale CDM project activities

3. The SSC WG considered the requests for clarifications/revisions related to the application of approved SSC methodologies[1]. The requests submitted and the responses provided by the SSC WG are made publicly available on the UNFCCC CDM web site at: <http://cdm.unfccc.int/goto/SSCclar>.

4. The SSC WG took into account the methodological issues in the submissions and made recommendations for new methodologies in section C, revision & response to request for revision of approved methodologies in section D, response to request for new methodologies in section E and response to request for clarification in section F, as below.

Submission number	Title	Recommendations
SSC_075	Revision of AMS II.D to include sectoral scope 8 i.e. Mining and Mineral production	Refer to section D
SSC_076	Further clarification on debundling definition as given in paragraph 62 of EB26 meeting report	Refer to section F
SSC_077	Addition of renewable energy capacity as per paragraph 4 of AMS I.D.	Refer to section F
SSC_078	Avoidance of methane production from biomass decay through controlled pyrolysis	Refer to section C
SSC_079	Chemical and biological stabilization of solid waste carbon content for permanent storage, through controlled pyrolysis	Refer to section C
SSC_080	Avoidance of HFC emissions in rigid Poly Urethane Foam (PUF) manufacturing	Refer to section E
SSC_081	Demand-side GHG emission reduction project activities through reduction in Ordinary Portland Cement consumption during concrete mix preparation	Refer to section E
SSC_082	Type III methodology for fugitive methane recovery from mining operations	Refer to section E
SSC_083	New category for recovery and utilisation of waste gases for heating	Refer to section E
SSC_084	Methane avoidance in animal waste management systems (AWMS) through separation of volatile solids	Refer to section E
SSC_085	Request for revision of AMS III.F to cover capacity expansion of existing compost production facilities	Refer to section D

[1] The terms 'methodology' and 'category' have analogous connotations in the context of this report

SSC_086	Proposal for a new type III methodology: Reduction in consumption of electricity by recovering soda from paper manufacturing process	Refer to section C
SSC_087	Proposed new type III category: Avoidance of fluorinated gas fugitive emissions in air-conditioning and refrigeration systems	Refer to section E
SSC_088	Clarification on AMS III B	Refer to section F

C. Recommendations for new methodologies

5. **Request for a new type III methodology - Avoidance of methane production from biomass decay through controlled pyrolysis:** In response to the submission SSC_078, the SSC WG agreed to recommend a new methodology titled 'SSC III.L Avoidance of methane production from biomass decay through controlled pyrolysis', as contained in annex 1. The methodology is applicable to project activities that avoid or reduce methane emission from biogenic organic matter that would have otherwise been left to decay under clearly anaerobic conditions till the end of the crediting period in a solid waste disposal site without methane recovery. Due to the project activity, decay is prevented through controlled pyrolysis[2]. The methodology stipulates that the pyrolysed residues will only be considered biologically inert if the ratio of volatile-carbon/fixed-carbon is equal to or lower than 50%. For estimating the avoided methane emissions from biogenic waste, the proposed methodology refers to the approved methodological tool to determine methane emissions avoided from dumping waste at a solid waste disposal site[3].

6. **Request for a type III methodology - Chemical and biological stabilization of solid waste carbon content for permanent storage, through controlled pyrolysis:** The SSC WG noted that SSC_079 is a complementary submission by the author of SSC_078 requesting a new methodology to supplement the emission reductions from the methane avoidance component with additional emission reductions arising from permanent stabilization of degradable carbon in the biogenic waste. Taking into account the guidance by the Board at its twenty eighth meeting in this regard (see paragraph 52), the SSC WG agreed that the proposed activity is not eligible under the modalities and procedures of CDM.

7. **Proposal for a new type III methodology - Reduction in consumption of electricity by recovering soda from paper manufacturing process**: In response to the submission SSC_086, the SSC WG agreed to recommend a new methodology titled 'SSC III.M Reduction in consumption of electricity by recovering soda from paper manufacturing process', as contained in annex 2. The proposed methodology is for project activities saving caustic soda in paper manufacturing. Caustic Soda, a raw material used in paper manufacturing, is produced by technologies, which are very electricity intensive. In the proposed methodology, Caustic Soda will be produced by recovering it from waste black liquor produced in paper manufacturing, with a significant reduction in electricity consumption per metric tonne of caustic soda. The reduced electricity required to produce a unit weight of Caustic Soda from chemical recovery process compared to the status quo production will result in GHG emission reduction.

D. Revision & requests for revision of approved methodologies

8. **Revision of AMS I.A, AMS I.C and AMS I.D to include additional guidance on cogeneration project activities**: Taking into account the guidance from the Board to recommend additional guidance in the approved methodologies to clarify methods and options for baseline calculations where found necessary, the SSC WG agreed to recommend revisions to AMS I.A, AMS I.C and AMS I.D as contained

[2] Pyrolysis is defined as the thermo-chemical decomposition of organic materials into a carbon rich residue, non-condensable combustible gases and condensable vapors, by heating in the absence or lack of oxygen, without any other reagents, except possibly steam.

[3] See annex 14 of EB26

in annexes 3, 4 and 5. The proposed revisions provide options for baseline calculations when cogeneration from fossil fuels is the baseline activity. The recommended revisions also clarify that all cogeneration projects shall apply AMS I.C. The SSC WG noted that these small-scale methodologies did not explicitly provide procedures for calculating emissions where cogeneration from fossil fuels is the baseline. Including this option in AMS I.C will broaden the applicability of this methodology.

9. Taking into account the request from the Board to recommend additional guidance for monitoring of project activities applying AMS I D for biomass-fired renewable energy generation, the SSC WG agreed to recommend that all biomass project activities (firing only biomass or firing biomass and fossil fuel) should monitor the biomass and any fossil fuel used. Further it recommended that the project participants shall report the ex-ante specific fuel consumption of each type of biomass fuel and any fossil fuel use of the proposed project. Electricity generated with fossil fuel is estimated using the quantity of fossil fuel used and the specific fuel consumption. The portion of the monitored amount of electricity generated with biomass is calculated as total electricity generated minus the electricity generated with fossil fuel. This portion of monitored amount of electricity generated by biomass shall be compared with electricity calculated using ex-ante specific fuel consumption and monitored amount of each type of biomass fuel used. The lower of the two values is used to calculate the emission reductions.

10. **Revision of AMS III.D**: As requested by the Board at its twenty seventh meeting the SSC WG recommended revision of AMS III.D to clarify that in the monitoring plan on-site inspections are to be conducted for each individual farm.

11. Further, revisions in AMS III. D have also been proposed with regard to monitoring of flares to be consistent with other methodologies for methane capture and flare (e.g. AMS III. H). It is proposed that project participants shall use of one of the two following options to determine the efficiency of the flaring process in an enclosed flare:

(a) To adopt a 90% default value; or

(b) To perform a continuous monitoring of the efficiency.[4]

If option (a) is chosen, a continuous check of compliance with the manufacturer's specification of the flare device (temperature, biogas flow rate) shall be conducted. If in any specific hour any of the parameters is out of the range of specifications, a 50% of the default value shall be used for that specific hour. For open flares 50% default value shall be used, as it is not possible in this case to monitor the efficiency. If at any given time the temperature of the flare is below 500ºC, 0% default value should be used for this period.

The revised methodology (AMS III. D) is contained in annex 6.

12. In this regard the SSC WG agreed to bring it to the attention of the Board that AMS III.D is potentially applicable to bundled projects with a large number of very small distributed units for manure management (e.g. several thousand farms/households in distributed geographic locations each installing a biogas digester as described in SSC_051). Taking into account the very small annual emission reductions that these individual units could potentially achieve, the SSC WG agreed that the proposed monitoring requirements might not be economically viable for such projects. The SSC WG discussed options to recommend simplified monitoring requirements for these very small projects, however concluded that it is more appropriate to develop new methodologies to recommend for such projects instead of modifying AMS III .D.

[4] The procedures described in the Methodological Tool to determine project emissions from flaring gases containing methane shall be used.

13. In this context the SSC WG also noted that these issues of economic viability also apply to many other types of bundled projects such as household energy projects (e.g. solar lighting projects) using AMS I.A.

14. The SSC WG agreed to recommend undertaking further analysis to identify methodological issues that affect the very small units to propose options and solutions to address these issues.

15. **Revision of AMS III.I**: As requested by the twenty eighth meeting of the Board the SSC WG recommended additional guidance to clarify how the number of months with average lagoon temperature above 15°C in AMS III.I is determined. The applicability conditions of this approved methodology restrict the calculation of emission reductions to only those months during which average lagoon temperature is above 15°C. The proposed changes entail monitoring of the ambient temperature instead of the lagoon temperature, which is consistent with the approach of AM0013, to determine the months that should be considered for emission reduction calculations. The revised methodology is contained in annex 7.

16. **Revision of AMS II.D to include sectoral scope 8 i.e. Mining and Mineral production:** The SSC WG noted that the submission SSC_075 requested a revision of AMS II.D to broaden the applicability of the methodology to include energy efficiency acitivities in mining. While considering this submission the SSC WG also noted the absence of treatment of issues relating to the lifetime of replaced or retrofitted equipment in this methodology and proposed additional revisions to be consistent with the methods of other similar small scale methodologies, as contained in annex 8.

17. **Request for revision of AMS III.F to cover capacity expansion of existing compost production facilities:** In response to the submission SSC_085 the SSC WG agreed to recommend a revision of AMS III.F to include project activities that enhance the capacity utilization of existing compost facilities as contained in annex 9. The SSC WG noted that many existing compost production facilities operate at a much lower level than their original design size due to high production costs and/or low demand for compost products. The proposed revisions provide methods to determine the eligible increased capacity utilisation based on the historical records of annual amount of waste composted at the facility.

E. Response to request for new methodologies

18. **Request for a type III methodology - Avoidance of HFC emissions in rigid Poly Urethane Foam (PUF) manufacturing:** The SSC WG noted that submission SSC_080 is for a proposed project activity that shifts from HFC foam blowing agent (e.g. HFC 134a) used in the baseline to a hydrocarbon (e.g. pentane) blowing agent in the manufacture of rigid foams. The SSC WG agreed to seek further clarifications from the project participants such as the following:

(a) The equation included in the methodology to estimate the baseline emissions has two components i.e. one component that calculates the first year loss (production loss) of HFC foam blowing agent and the other component that calculates the annual loss of HFC foam blowing agent until the end of the crediting period. The SSC WG noted that the latter proposed component calculates annual losses based on total HFC used in manufacturing of the closed cell foam, which results in inaccuracies in the estimations. The SSC WG agreed to seek further clarifications from the project participants as to why the 'banked' foam blowing agent i.e. HFC stored in the cells of the foam materials, is not included in the calculations of the annual losses of the foam blowing agent.

(b) The 2006 IPCC guidelines for national GHG inventories have provided upper bound estimates i.e. maximum potential of the fraction of the HFC blowing agent losses during foam production (first year losses) and the fraction that would be lost each year (annual losses) from remaining HFC stored in foam cells. These fractions are upper bound estimates and their direct use as proposed in the

submitted methodology is not conservative for baseline calculations. The project participant is requested to suggest how more conservative estimates can be derived from the IPCC upper bounds.

19. **Request for a new category for demand-side GHG emission reduction through reduction in Ordinary Portland Cement consumption during concrete mix preparation:** The SSC WG noted that submission SSC_081 requested a new category for project activities that reduce the use of Ordinary Portland Cement (OPC) at construction project sites where concrete mix would be prepared. In particular, the technology involves use of alternative cementitious material(s) and/or water reducing admixtures in the concrete mix preparation thereby reducing the requirement for OPC in the concrete mix. The submission argues that reduced use of OPC can be seen as an emission reducing activity. The SSC WG agreed to seek further clarifications from the project participants on issues such as the following:

(a) The methodology shall include a procedure to demonstrate that the concrete aggregate mix in the project activity is not a common practice in the market for similar use.

(b) The methodology shall include a procedure to determine the source of OPC or choose the most conservative emission factor from among the potential supply sources of OPC.

(c) The methodology shall include in the boundary physical location(s) of the construction sites (e.g. building, road where the concrete mix is used) where the concrete mix is applied.

(d) The methodology shall give clear guidance on the duration of the crediting period for the project activity applying the methodology.

20. **Request for a new category for fugitive methane recovery from mining operations:** The SSC WG noted that the submission SSC_082 requested the creation of new category for capture, flare/combustion of fugitive methane capture in mining operations. The SSC WG agreed to seek further clarifications from the project participants such as the following:

(a) Whether the methodology is intended for any mineral extraction activity, in particular considering the case of coalmines.

(b) The methodology shall provide additional guidance on how to prove that the methane would have been emitted in the absence of the project activity.

(c) Monitoring procedures to estimate CO2 emission from energy consumption for the extraction of methane shall be included.

(d) The calculation of project emissions requires the estimation of the efficiency of the flare. The project participant may also consider using the approved methodological tool to determine project emissions from flaring gases containing methane for this estimation.

21. **Request for a new category for recovery and utilisation of waste gases for heating:** The SSC WG noted that the submission SSC_083 requested a new category for project activities in industrial facilities that entail recovery and utilization of process generated waste gas as a thermal energy source for industrial processes. As proposed, the thermal energy provided by waste gas will replace an equivalent quantity of fossil fuel used as thermal energy source in the industrial processes in the baseline scenario and results in emission reductions. The submission states in the accompanying PDD that waste gas (also termed off gas) in petroleum refineries are generated due to process fluctuations including depressurization of process equipment and in the baseline it is discharged to flare stack and flared. The SSC WG agreed to seek further clarifications from the project participants on issues such as the following:

(a) Whether the introduction of FGRS (fuel gas recovery system) can result in increased collection of low-pressure waste gas from process units as compared to low-pressure waste gas routed to the flare stack. The SSC WG suggests using historical data to determine and cap the amount of waste gases that can be considered for emission reduction.

(b) Further explanation/justification on how to determine the baseline fuel.

(c) Methodology proposes monitoring of the NCV (net calorific value) of the waste gas on a monthly basis. Choice of monthly recording frequency shall be justified particularly with reference to the range of variability of NCV of waste gas to be expected.

22. **Request for a new type III methodology for methane avoidance in animal waste management systems (AWMS) through the prevention of decay of separated volatile solids**: The SSC WG noted that the submission SSC_084 is for a proposed project activity that separates the volatile solids from animal manure (e.g. through filtration) so that methane emission from the separated solids is avoided. Baseline disposal of manure in liquid based system such as anaerobic lagoon is considered in the accompanying project design document. The proposed methodology follows the 2006 IPCC guidelines for national GHG inventories for emission factors for lagoon based systems in the baseline and dry storage of the separated solids in the project scenario. The SSC WG agreed to seek further clarifications from the project participants such as further information on the characteristics of the separated solid to verify if it meets the IPCC criteria for solid storage, inclusion of guidance in the methodology to ensure long retention periods of manure in the baseline lagoon is indeed the case, consideration of uncertainties in calculations and clarifications on guidance for sampling and monitoring procedures.

23. **Request for a new type III methodology for avoidance of fluorinated gas fugitive emissions in the refrigeration and air conditioning sector:** The SSC WG noted that the submission SSC_087 is for project activities that shift from the use of HFC refrigerants (e.g. HFC 134a) to alternate refrigerants such as hydrocarbons with negligible GWP (global warming potential) and ODP (ozone depletion potential) in refrigeration and air conditioning sector such as mobile air conditioning, domestic refrigeration, industrial and commercial refrigeration activities. The SSC WG considered the earlier versions of the methodology submitted to it in three previous meetings (SSC_066, SSC_057 and SSC_052) and provided responses to the project participants. The SSC WG noted that in the proposed project HFC recovered from baseline systems would be emitted in alternative uses. Table 7.9 included in Volume 3: Industrial Processes and Product Use of 2006 IPCC Guidelines for national GHG inventories provides different emission factors for applications of refrigerants in R & AC systems. It is obvious that recovered HFC will eventually leak over a period of time depending on the leakage rates indicated in the table referred to above. Therefore the SSC WG recommends that alternate emission reduction calculation options will have to be suggested taking into account the 2006 IPCC guidelines before this methodology can be further considered. Further the SSC WG agreed to indicate that only the destruction of the recovered HFC would allow full emission credits from the quantity recovered.

F. Response to request for clarification

24. **Further clarification on definition of 'technology/measure'[5] applicable to 'determining the occurrence of debundling' and capacity addition of renewable energy[6]:** The SSC WG noted that the requests for clarification (SSC_076 and SSC_077) are in the context of two biomass projects in a paper industry currently in the validation process. Both the projects are being undertaken at the same plant using the same methodology i.e. AMS I.D. One of the projects is for power generation and the other involves cogeneration of heat and power. The aggregate added power capacity of both the projects is 10 MW. The SSC WG noted that the submission (SSC_077) requested a clarification on whether to consider the aggregate installed thermal capacity of the projects to determine the eligibility limits of the project. Further SSC_076 requested whether the two projects, referred to above, belong to the 'same technology/measure' for the purposes of determining the occurrence of debundling, given the same project participant undertakes them and project boundaries are separated by less than 1 km.

The SSC WG agreed to clarify that the added thermal capacity of the boilers supplying steam to the turbines should be lower than 45 MW thermal. Furthermore, considering that the two projects provide different outputs i.e. steam and electricity in one case and electricity only in the other case, they should be considered as adopting a different technology/measure. The author of the submission shall take note of paragraph 37 of the thirtieth meeting report of the Board. Given the two projects described in the submission are type I projects and are providing energy to the same user they should be considered as debundled components if they are submitted for registration within 2 years of each other.

25. The SSCWG noted that submission SSC_088 requested a clarification with regard to application of AMS III B for a project activity that displaces baseline diesel fuel used in a thermal power plant by connecting to a national electrical grid. AMS III. B is intended for fossil fuel switch project activities. The SSC WG clarified that AMS III. B is not applicable to such project activities.

G. Biofuels

26. Based on the guidance by the Board and based on additional work carried out by the Meth Panel since the twenty fifth meeting of the Board, the SSC WG continued its consideration of the draft category for biofuels in transportation. The working group noted that the Board has not approved the tool for the avoidance of double counting as recommended by the Meth Panel.

27. The SSCWG identified issues relating to the rating of vehicles, leakage from agricultural and transportation activities and treatment of flexible fuel engines where further work is required to be carried out. The working group agreed to continue to consider these issues and report progress at the next meeting. The working group also noted that monitoring of usage of blended biofuels in flexible fuel engines presents a significant methodological challenge irrespective of the scale of the project.

[5] The Board has defined 'Technology/measure' as below:

(a) Two different project activities will be considered to be applying the same technology if they provide the same kind of output and use the same kind of equipment and conversion process.

(b) Two different project activities will be considered to be using the same measure if they constitute the same course of action and result in the same kind of effect (e.g. two projects using the same management practice such as fuel switch

[6] See paragraph 4 of AMS I.D

H. Consistency Check of methodologies

28. The SSC WG undertook a consistency check of type II energy efficiency methodologies against the approved methodology AM0046 - 'Distribution of efficient light bulbs to households' particularly regarding the treatment of technical line losses where electricity is the baseline and agreed that they are consistent with each other.

I. Other Issues

29. SSC WG agreed to recommend that submissions requesting the creation of a new small-scale methodology should be made minimum eight (8) weeks prior to the meeting date of the SSC WG. Furthermore it recommended that submissions requesting revision or clarification of an approved SSC methodology, shall continue to be submitted minimum four (4) weeks before the meeting date of the SSC WG to be considered at the meeting.

J. Schedule of meetings

30. The SSC WG agreed to schedule its tenth meeting from 23 to 25 May 2007, taking into account the schedule of the Board and depending on the small-scale methodology submissions received.

List of Annexes:

Annex 1. SSC III.L Avoidance of methane production from biomass decay through controlled pyrolysis

Annex 2. SSC III.M Reduction in consumption of electricity by recovering soda from paper manufacturing process

Annex 3. Revision of AMS I.A

Annex 4. Revision of AMS I.C

Annex 5. Revision of AMS I.D

Annex 6. Revision of AMS III.D

Annex 7: Revision of AMS III.I

Annex 8: Revision of AMS II.D

Annex 9: Revision of AMS III.F