

 <p align="center"> CDM: Proposed New Methodology Meth Panel summary recommendation to the Executive Board (version 01) <i>(To be used by the Meth Panel in addition to the full recommendation to the Board regarding a proposed new methodology (F-CDM-NMmp))</i> </p>	
Date and number of Meth Panel meeting:	4 th – 8 th September 2006
Related F-CDM-NM document ID number (electronically available to EB members)	F-CDM-NM0121
Title of proposed new baseline methodology:	Hydropower Projects that Creates New Reservoirs or Expand Existing Ones
Title of underlying project activity:	Bumbuna Hydroelectric Project
History of submission: (new section)	First Submission (Round 11; 01 June 2006)
1. One sentence describing the purpose of the methodology. <i>(new section)</i>	
This methodology is designed for hydro electric power projects, based on new or expanded reservoirs, and which are connected to small-sized grids that also include alternative, off-grid generation resources.	
2. Suggested applicability of methodology <i>(former section A.I and B.I)</i>	
>> <ul style="list-style-type: none"> There is sufficient publicly available information to document in a transparent and conservative manner the nature of the prohibitive barriers to which the proposed project activity is subject, and the nature of the means by which its registration as a CDM activity would enable the project to overcome those barriers (and thus be successfully undertaken); There is sufficient publicly available information to document in a transparent and conservative manner that the proposed project is occurring in a sector and investment context that does not feature the type of proposed activity as a common practice; The project will provide electricity to the electric grid, displacing power that would otherwise be provided by other generating sources through the operation and expansion of the electric sector. The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available; The project is in an electric sector that is not dominated by generating sources with zero- or low-operating costs such as hydro, geothermal, wind, solar, nuclear, and low-cost biomass, and this fuel mix is expected to persist for the duration of the crediting period; Electricity exports are included in electricity generation data used for calculating and monitoring the baseline emission rate to avoid potential leakage. Methodology will apply in cases where reservoirs are created or expanded as a result of a hydroelectric project. 	
3. Summary description of baseline methodology . Short statements on each on how the proposed methodology: (chooses the baseline scenario, demonstrates additionality, calculates baseline emissions, calculates project emissions, calculates leakage, calculates emission reductions) <i>(former section B.I.)</i>	

The methodology expands the application of ACM0002 to hydro electric plants that create new reservoirs or expand existing ones as and when applicable based on the power density of the hydro reservoir (based on EB 23 recommendations). The “Tool for the demonstration and assessment of additionality” is used for the assessment of baseline scenarios and for additionality. The proposed baseline methodology has two components: a) estimating reservoir emissions as project emissions and b) estimating baseline emissions for grid connected renewable projects, where the project represents a special case (in addition to what has been defined in ACM0002) wherein a diesel emission factor (on the grounds that in developing countries, hydro facilities can displace significant amounts of off-grid diesel generation as well as grid connected electricity generation facilities) is used. The diesel-generation default emission factor is defined according to the method described in the small scale diesel category baseline method with a default value as 0.8 tCO₂/MWh to be used for both grid and off grid energy supply. In its current form, the methodology includes an ex-post correction of emission calculations to account for emissions of methane from the hydro electric facility reservoir using fixed default values of emissions fluxes of 190 mg/m²/day for CO₂ and 200 mg/m²/day for CH₄. Ex post measurements are used since it is currently not possible to make accurate predictions of these emissions ex ante.

4. Suggested “recommendation level” for the baseline and monitoring methodologies (A, B or C).
(former section A.I and A.II.)

The suggested recommendation level for the baseline and monitoring methodologies is a B.

5. Major reasons for B/C choice from the proposed baseline methodology: (outline the major reasons for needing revision/rejection)

(former section A.I.)

The feedback information obtained from the project proponent (PP) has actually moved the submission forward. However, some required changes were not addressed, neither were clarifications on why they should be retained given in the feedback from the PP. It is important to point out that for reservoirs below 4 W/m², the uncertainties inherent in the measurements required in this methodology may be so significant that there is a chance that no CER will be realized. The point here is that although the measurement/monitoring are possible, they are very difficult to implement. In addition, such measurements are characterized by a high level of uncertainties which will require a comprehensive elaboration of statistical significance.

The major issues remaining to be addressed by the PP include:

- The first and second applicability conditions should be deleted as they are not really applicability conditions but a condition that applies to all CDM projects;
- The fifth applicability condition is actually not an applicability condition and should be removed. Instead, the fact that electricity exports are included in electricity generation data used in calculation and the baseline should be included in the methodology
- Air sampling methodology is proposed to be used at representative points in the reservoir for estimating and monitoring emissions. There is a need to provide guidance within the methodology on how statistical significance will be incorporated into the measurement at each cluster. In this sense, a statistical protocol has to be provided.
- Equally important is the need to include in the new methodology, how measurements at clusters will be generalized to provide emission estimates for the entire reservoir area. The pertinent point here is that there is a need for the submission to provide statistically robust framework to generalize point measurements at clusters as well as providing sound method to generalize such measurements to the entire reservoir, while at the same time incorporating the uncertainties. Here too a statistical protocol has to be provided.
- Another issue that will need to be addressed in the new methodology is the variability in the temporal and spatial dimensions of the measurements at a typical reservoir. Although it can be argued that this may be well captured in the uncertainty analysis, the existence of such variability is a good factor that will determine the selection of the clusters where measurements will be carried out. It is important that how this will be carried out should be well articulated in the new methodology. Here too a statistical protocol has to be provided.

- The baseline emission factor will either come from a CM analysis of a grid, where such exists or from historical data on captive generation or their default. The vintage of the data required for the determination of the baseline EF was not satisfactorily clarified in the feedback although this need was stressed in the initial evaluation of the submission. More information must be provided to clarify the age of national data that will be used.
- The adequacy, consistency, accuracy and reliability of the database used in this methodology need to be addressed. In its present form, the adequacy, consistency, accuracy and reliability of some of the data representing some of the parameters are difficult to determine. For example, emission flux values for reservoirs may be reliable only for project areas located in the tropical regions where default values for such parameter is available in the absence of measurements, although it is not clear enough, given the current level of scientific knowledge, whether or not default values can be used at all.
- There is a need to establish consistent differentiation between degassing, diffusion and bubbling emissions in the methodology. These are not very clearly established in the current format of the submission. Furthermore, while N2O emissions were mentioned in some part of the submission, it was not properly covered in some sections. For example N2O emissions was not addressed in the monitoring part;
- There is a need to expatiate more on quality assurance procedure in the submission;

6. Any major issues arising from the assessment of the proposed monitoring methodology (if different to those already raised above).

(former section A.II.)

None

7. Any other issues arising to be stated, if necessary (e.g. cross-cutting, general or precedent-setting issues raised by the proposed new baseline or monitoring methodology).

None



Signature of Meth Panel Chair

Date: 13/09/2006

(Rajesh Kumar Sethi)



Signature of Meth Panel Vice-Chair

Date: 13/09/2006

(Jean-Jacques Becker)

Information to be completed by the secretariat

F-CDM-NMmp doc id number	F-CDM-NM0121
Date when the form was received at UNFCCC secretariat	13 September 2006
Date of transmission to the Executive Board	13 September 2006
Date of posting in the UNFCCC CDM web site	13 September 2006