



**Approved baseline and monitoring methodology /
methodological tool clarification response form
(Version 03.0)**

INFORMATION TO BE COMPLETED BY THE SECRETARIAT OR PANEL / WG

Date and number of Panel / WG meeting:	N/A
Title/Subject of the request for clarification:	Clarification on the applicability of national standards comprised of physical, chemical and microbiological standards under AMS-III.AV.
Reference number of the request for clarification:	SSC_793
Exact reference (number, title and version) of the methodology or methodological tool to which the request for clarification applies:	AMS-III.AV.: Low greenhouse gas emitting safe drinking water production systems --- Version 8.0
Fast track or Regular track:	<input checked="" type="checkbox"/> Fast track <input type="checkbox"/> Regular track

Summary of the request for clarification

Original text from the Stakeholder:

Dear Meth Panel,

Clarification by the secretariat or Panel / WG on SSC 771 was provided:

To demonstrate that the project technology achieves compliance with the national standard, the national standard should be applied in whole.

In case you perceive that certain sections of the national standard are not applicable or essential for the purpose, then you may seek a clarification providing due justifications according to the "Procedure: Development, revision and clarification of baseline and monitoring methodologies and methodological tools".

Referring to the clarification provided on SSC 771, I would like to get more clarity on the applicable national standard, as provided in the justifications below:

National standard quality consists of physical, chemical and microbiological standards. Among three standards, microbiological standard should be considered as the "Applicable national standard" for CDM project using AMS-III.AV.

- 1) AMS-III.AV is developed to reduce CO₂ emissions by replacing boiling activity to get safe drinking water using non-renewable biomass or fossil fuel with water purification technology other than boiling.

Boiling can only remove microbiological contaminants such as bacteria and cannot remove physical and chemical contaminants. The purpose of boiling is to prevent water borne disease by removing pathogens.

Therefore, physical and chemical standards are not applicable or essential to measure the reduction of pathogens in the pre- / post- treated water by boiling or by other water purification technology. Microbiological standard of national standard alone should be also considered as applicable national standard.

- 2) Chlorination is the most common disinfection technology applied in rural area by many international organizations and NGOs. Chlorination can replace boiling because it prevents waterborne disease, so that the people who are provided chlorinated water don't boil water.

Chlorination meets only targeted protection of WHO performance criteria¹ and cannot remove physical and chemical contaminants which means it cannot meet the national standard. It only complies microbiological national standard. However, it can be applicable because it replaces boiling.

The applicability should be decided based on the fact that the technology can replace boiling water.

- 3) It is obvious that people in rural areas have less chance to use water purification technologies other than boiling to get safe drinking water.

In rural areas (sometimes even in town areas) it is practically difficult to apply water purification technologies which meet all national standards including physical, chemical and microbiological standards (for example, under sink type water purifier using activated carbon and RO filter, etc.) sustainably. And there are few technologies that meet WHO's comprehensive protection performance target but they have also limitations to apply in rural area (turbidity, conditional sunlight, etc.) as reported by WHO¹.

If water purification technology is not sustainable, people will go back to boil their water. In contrary, if people experience water purification technology applied in a CDM project which is effective and sustainable, they will maintain the technology after the project. Even we can expect CDM project will help various water purification technologies to penetrate and expand in rural area. This will help not only to reduce CO₂ emissions but also to achieve sustainable development goals (SDGs) 3. Good health and Well-being, 5. Gender equity, 6. Clean water and sanitation and 13. Climate action.

Therefore, the water purification should be sustainable and easy to maintain in rural area. And most of the water purification technology which is sustainable in rural area is focused on pathogen removal as with chlorination.

In conclusion,

Considering the purpose of the methodology AMS-III.AV, replacement of boiling water using non-renewable biomass or fossil fuel with water purification technology to reduce CO₂ emissions, microbiological national standard should be accepted as applicable national standard.

Reference

1. WHO (2019) Results of Round II of the WHO International Scheme to Evaluate Household Water Treatment Technologies

Clarification by the secretariat or Panel / WG

The Meth Panel would like to thank the author for the submission.

The methodology cited is applicable for projects introducing 'low greenhouse gas emitting water purification systems to provide safe drinking water (SDW)'. Substitution of fossil fuel or non-renewable biomass in the baseline for boiling water is a consequence which allows estimation of emission reduction, but it is not the sole objective of the project. Therefore, the quality of water produced by boiling water should not be the metric to compare and match the level of service provided by the project device but rather the quality requirements specified by the applicable WHO guidelines or national standard should be met.

The WHO (2019) report cited by the author of the submission includes several water purification technologies that meet the requirement of the methodology. It does not to also exclude the possibility of meeting the comprehensive protection requirement through chemical treatment such as chlorine treatment in stating the following 'These findings underscore the importance of appropriate site-specific dosing that is based on the chlorine demand of the water to be treated and regular monitoring to ensure that Free Residual Chlorine (FRC) concentrations of 0.2–0.5 mg/L are maintained. Making these adjustments requires competent technical support and regular monitoring, which may be difficult to achieve in individual households. Efforts are therefore needed to shift towards safely managed central chlorination at points of collection, in tanker trucks, in community/health care facility water storage tanks or in piped water systems'.

Paragraph 4 (b) of version 8 of the methodology cited specifies that 'Applicable national standard should be based on laboratory efficacy testing that, at a minimum, includes quantitative microbial measures of pre- and post-treatment challenge waters' with a view to guide the user to select an appropriate national standard. However, once a standard is selected, requirements specified by the standard for physical, chemicals and microbiological characteristics that affect safety and quality of drinking water shall be fully met.

Therefore, the Meth Panel is not convinced that methodology requires amendments or partial application of WHO guidelines or national standard is justified.

Version(s) of the approved methodology / methodological tool to which the clarification is applicable:

AMS-III.AV.: Low greenhouse gas emitting safe drinking water production systems --- Version 8.0

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	13 May 2016	Revised to include the row "Version(s) of the approved methodology / methodological tool to which the clarification is applicable"
02.0	18 July 2013	Revised to remove the row "Date and signature of the chair and vice chair of Panel/WG (in case of clarification by Panel/WG)"
01.0	4 July 2013	Initial publication. This document supersedes and replaces the following documents: <ul style="list-style-type: none"> • Recommendation Form for Small Scale Methodologies (F-CDM-SSCwg) (Version 01.1) • Recommendation Form for Small Scale A/R Methodologies and Procedures (F-CDM-SSC-AR) (Version 01.1)

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