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Rule Update: Requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices

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Background:

The Gold Standard Technical Advisory Committee has recommended developing new requirements to improve the robustness and transparency of usage rate monitoring for improved cooking devices, or improved cookstoves. The new monitoring requirements are built on current monitoring practices and based on findings from published peer reviewed literature and inputs from monitoring experts. The aim of these requirements is to improve monitoring of usage rates and to help project developers ensure the adoption and sustained use of project technologies to achieve the intended benefits. The requirements are also supplemented with guidelines to assist project developers for successful application.

Please contact us at help@goldstandard.org for any questions or clarifications.

Applicable to:

Impact Methodology	SDG
[401.13 TPDDTEC] Gold Standard Technologies and Practices to Displace Decentralized Thermal Energy Consumption*	SDG 13
[401.3 ADALYS] Methodology to Estimate and Verify ADALYs from Cleaner Household Air	SDG 3
[401.13 CR SLCP] Gold Standard Quantification of Climate Related Emission Reductions of Black Carbon and Co-emitted Species due to the Replacement of Less Efficient Cookstoves with Improved Efficiency Cookstoves	SDG 13

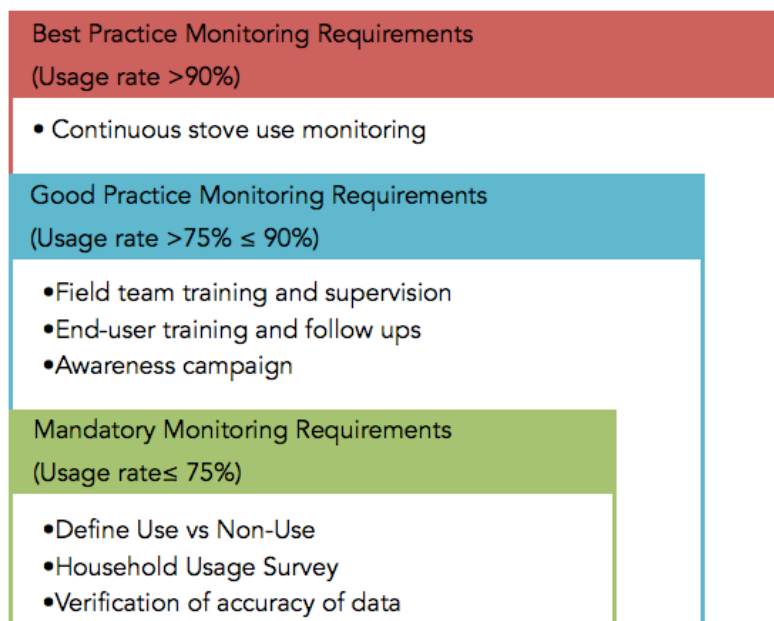* Also included following previous versions of this methodology
- Technologies and Practices to Displace Decentralized Thermal Energy Consumption V1.0
- Methodology for Improved Cook-stoves and Kitchen Regimes V.01 & 0.2

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Requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices

Date of publication: 23/08/2017

The requirements and guidelines presented in this document shall be followed to carry out the surveys to determine the usage rate (Up,y) of solid fuel[1] improved cooking devices and solar cookers. This parameter provides information on adoption or drop-off rate of the cooking devices. It is mandatory to follow the below requirements that will assist project developer determining the "user" and "non-users" and further monitoring and assessing the usage rate of cooking devices per age group distributed in the project activity. In case of any conflict with the primary methodology, the requirements mentioned in this Annex shall be followed.

There are three levels of usage Monitoring Requirements of increasing rigour that each have maximum usage rates that can be claimed by applying them. **Level A. Mandatory** must be followed by all projects, **Level B. Good Practice** and **Level C. Best Practice** are optional. In order to apply a higher level of usage rate, all of the Monitoring Requirements from the levels beneath shall be followed. This is summarized in the diagram below and described in more detail in the below sections:

Best Practice Monitoring Requirements
(Usage rate >90%)

- Continuous stove use monitoring

Good Practice Monitoring Requirements
(Usage rate >75% ≤ 90%)

- Field team training and supervision
- End-user training and follow ups
- Awareness campaign

Mandatory Monitoring Requirements
(Usage rate≤ 75%)

- Define Use vs Non-Use
- Household Usage Survey
- Verification of accuracy of data

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[1] These Guidelines do not apply to liquid and gaseous fuel based cookstoves, for which a comparable set of guidance will be developed in future. Until then, these types of cookstove projects will monitor the usage as per the registered monitoring plan or generic guidelines provided in relevant monitoring methodology.

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A. Mandatory Monitoring Requirements:

The mandatory requirements are applicable to all project activities that involve distribution of improved cooking devices applying the applicable methodology. The developer can claim up to a maximum 75% usage rate by meeting the mandatory monitoring requirements. These requirements include;

Step 1. Defining stove use and non-use:

The project developer shall define project stove use versus non-use (i.e. the continued use of traditional technology) to understand who should be considered eligible for crediting. It shall include criteria such as time since last used, frequency of use, duration of the project stove's use, extent to which the traditional technology is displaced, etc. The developer shall refer to baseline survey, project survey and KPTs to determine the representative cooking practice in the project boundary and to define the use and non-use of project stove.

Step 2. Household Usage Survey:

The project developer shall carry out an in person usage survey to determine stove use. The minimum sample size for the usage survey shall meet the requirements mentioned in the applicable methodology (e.g. section 3.1.C.b Usage Survey of the TPDDTEC methodology). The usage survey shall include the following key elements.

i.   *Kitchen observation* – The surveyor shall visit the household to gather objective information to support the usage survey findings (e.g. if the stove is warm to the touch, ashes present etc). This is to counter against survey bias from the respondent answering questions in a way that they think the interviewer wants to hear.

ii. *Interview with the primary cook* - The surveyor shall interview the primary cook of the household to gather information on stove use patterns including information on duration and frequency of use, as well as information on multiple stove use ('stove stacking') and seasonal trends.

iii. *Photos of the cooking area(s)* - The surveyor shall take photographs of the project stoves to gather visual data on the status of the stove; whether the stove is abandoned, damaged, or being actively used shall all be shown using clear photographs. A photo should show the whole kitchen, including all the stoves in use. The photos should be clear and in good light. Photos also serve to provide confirmation that the household was visited. Consent should be taken from primary cook prior to taking photos in the kitchen.

iv. *GPS coordinates* - The surveyor shall record the GPS coordinates of the household as they provide verification that the household was visited. Alternatively, date stamped and location specific photos of the household shall be taken as a verification of the household visit. Photographs taken under iii. above may also be used to meet this requirement.

Step 3. Verification checks:

The verification checks shall be performed by the project developer prior to verification by the VVB. At the conclusion of the data collection phase of the survey, the project developer representative shall telephone a randomly selected 5-10% of the surveyed households to verify that homes were visited by surveyors and the recorded responses are correct. The project developer shall record the details of the households and responses provided that have been reached via telephone.

B. Good Practice Monitoring Requirements:

The project developer can claim up to maximum 90% usage rate with Level A mandatory monitoring requirements i.e., step 1-3 and the following additional monitoring requirements.

Field team training and supervision:

The project developer shall provide training and supervision necessary to ensure field teams have the capacity required to complete usage survey successfully. The training of the field team is key to obtain a complete and accurate stove use dataset. The training workshop shall be conducted immediately before the fieldwork commences. The aim of the training workshop is to ensure that all team members have the knowledge and skills to carry out the required work with confidence and to a high standard. The team members need to understand the usage survey objectives and be proficient with the recruitment procedures, data collection and management processes, and protocols for troubleshooting. Detailed written guidelines and instructions for all procedures shall be provided and updated as necessary.

There should be close supervision, including direct observations, of the field team members, particularly at the onset of the usage survey. Regular review of the collected data should be carried out, especially in the first days of data collection, to assess enumerator performance and re-train/supervise those that fall below the expected standard. In some cultures, it may be imperative to have female field workers. To demonstrate compliance with this requirement, the project developer shall keep records of all trainings including the details of the staff trained.

End-User Training and follow up visits:

The project developer shall provide locally appropriate end-user training on project stove use via demonstrations and follow-up visits. It includes demonstrations, training at the point-of-sale and post-sale follow-up visits. These visits are critical to ensure correct and sustained use of the project stove. To demonstrate compliance with this requirement, the project developer shall keep records of all demonstrations, training and follow up visits.

Awareness campaign:

The developers shall organise the campaign to make end-user aware about the benefits of continuous use of project stove and key product attributes. The awareness campaigns can be carried out together with the sales promotions and end-user training. To demonstrate compliance with this requirement, the project developer shall keep records of all training and follow up visits.

C. Best practice requirements:

The project developer can claim above 90% usage rate by applying Level A and B and following additional monitoring requirements.

Stove use monitoring:

Stove use shall be monitored in randomly selected representative sample of households with temperature-sensing data loggers known as Continuous Stove Monitors (CSMs). CSMs[2] is a generic term for devices that monitor and log time-resolved stove usage, usually through keeping track of temperature. The monitoring campaign shall be conducted in minimum 100 households for at least 90 days, with at least 30 samples for project technologies of each age being credited. Due care shall be taken to install the devices in a manner that minimizes influencing the behavior of the stove users. The resulting stove temperature profiles can be analysed to determine the frequency and duration of stove use for all of the cooking devices. The sensor data from the monitored household sample group shall then be used to determine the usage rates to provide an appropriate estimate of stove usage (drop-off) for all homes.

Enforcement of the usage survey guidelines:

New Projects: The project developer submitting a request for registration after 1ˢᵗ November 2017 shall apply these guidelines. These guidelines will be optional for any retroactive verification carried out along with validation for projects submitted for registration between 1ˢᵗ November 2017 and 1ˢᵗ July 2018.

The project developer submitting a request for registration between 1ˢᵗ July 2017 and 1ˢᵗ November 2017 or projects that are under registration review process can claim usage rate following the previous guidelines for the monitoring period where the verification report is submitted by VVB till 1ˢᵗ July 2018. After this date, the issuance request shall be submitted with usage rate monitoring carried out in line with these new guidelines.

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[2] CSMs is a generic term for devices that monitor and log time-resolved stove usage, usually through keeping track of temperature. They may also be referred to as SUMs (Stove Use Monitors).

The project developer can update usage rate monitoring from one level to other level mentioned in this document, anytime during the crediting period. However, for any given year usage survey monitoring shall be carried out as per the chosen level at the start of monitoring year.

Registered projects: The project developer can claim usage rates following the registered monitoring plan for monitoring periods where the verification report is submitted by VVB till 1st July 2018 for registered Gold Standard improved cookstove projects applying TPDDTEC V 1.0 & 2.0 and Methodology for Improved Cook-stoves and Kitchen Regimes V.01 & 0.2. After this date, the issuance request shall be submitted with usage rate monitoring carried out following these guidelines. The project developer can submit the revised monitoring plan with the next issuance request submitted prior to 1st July 2018.

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Summary table of stove usage survey Requirements and Guidelines:

Topic	Action	Type	Reason	Expected Result	Examples
Introductory questions on stove use (interview primary cook)	1. Ask if the respondent is the primary cook of the Household 2. Ask what stoves and fuels are used in the household	Survey (reported)	1. To ensure that the usage questions are directed to the person who is most knowledgeable 2. To understand the set of stoves/fuels used in the household	Ensure that the primary user of the stove is present and questions are directed towards that person. If the primary user is not present, the survey should be stopped/delayed.	Q1. Are you the primary cook (or primary user of stoves) in the household? Q2. What stove types and fuel types do you use for cooking?
Defining stove use and non-use	Ask how often the respondent uses the project stove	Survey (reported)	This question checks the introductory question on stoves/fuels	Respondents who report low frequency usage of the project stove are non-users	Q. 1 How often do you use the project stove? Q. 2 When was the last time you used the project stove? Q. 3 How many times did you use the project stove in the past week?
Kitchen observation	Observe and take photograph of the	Observed & Photo	This action confirms whether or not the	If stove cannot be photographed, the	

	project stove and the kitchen (along with other stoves in use)		stove is present in the HH	Household shall be considered a non-user	
Physical signs of usage (Kitchen observation)	Observe if the project stove shows signs of usage	Observed	This indicates whether the stove has been in use recently	If there are no signs of usage, the HH is considered a non-user	Typical signs include ashes in/near the stove, black/char markings on stove, etc.
Verification of household visit	Record the GPS coordinates or date and time stamped photographs of the household	Instrument	Provides verification that the household was visited and is in the sales database	If GPS coordinates or date and time stamped photographs that helps in identification of household are not recorded, this household data cannot be included in the stove use rate determination	GPS coordinates or date and time stamped photographs that helps in identification of household generated from smartphones
Verification of data accuracy	1. Telephone call-backs by project developer to a subset of HHs 2. Use of electronic data collection	Phone call	1. To verify that the households were visited and the survey data is accurate. 2. Facilitates real-	1. If call-backs cannot verify the survey data for the subset of households, every survey in the	

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			time data checking and allows for built-in consistency checks	associated dataset must be verified before inclusion in final dataset 2. Higher quality data and time savings	
Field team training and supervision	1. Conduct a training before survey begins 2. Provide detailed written guidelines and instructions 3. Provide close supervision, especially in first days 4. Regularly review collected data, especially in first days	Training & supervision	To ensure that all field team members have the knowledge and skills to carry out the required work to a high standard. To ensure the data are of a high quality.	Greatly increased chance of generating a complete, accurate, credible dataset of stove use	
End- User Trainings and follow up visits:	Organise project stove demonstration, end user training and follow up visits	Reported	Continuous end-user engagement ensures correct and sustained use of project stove	Ensure correct and sustained use of project stove	
Awareness	Organise	Reported	Awareness raising	Raise awareness	

campaign	awareness campaign to raise awareness about continuous use of the project stove		about importance of health, non-health impacts and key product attributes helps in increasing adoption rate	and motivate end user to adopt project stove	
Stove use monitoring	Temperature sensor should be placed on all stoves in a sub-sample of households to provide record of use	Instrument	Data from sub-sample used to determine the frequency and duration of stove use for all of the cooking devices	Incentives will be aligned with enhanced adoption and greater emissions reductions. Reported usage rates will be more conservative, but very well adopted stoves will receive a well-deserved benefit.	Examples are StoveTrace, SweetSense, iButtons, and new market entrants expected soon