

## Guidance on Selection Criteria For Gold Standard Methodology to Estimate and Verify ADALYs from Cleaner Household Air



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## About Gold Standard

Gold Standard was established in 2003 by WWF and other international NGOs as a best practice standard to ensure projects that reduced carbon emissions under the UN’s Clean Development Mechanism (CDM) also fostered sustainable development. Now with more than 80 NGO supporters and 1400+ projects in over 80 countries, Gold Standard projects have created billions of dollars of shared value from climate and development action worldwide.

Gold Standard’s vision is Climate Security and Sustainable Development for all and Mission is to catalyse more ambitious climate action to achieve the Global Goals through robust standards and verified impacts. For more information about Gold Standard, visit - <https://www.goldstandard.org/#our-story>.

## Section 1.0: Introduction

### Problem Overview:

The ADALYs methodology is a first of its kind approach to certify health impacts from clean cooking interventions. The personal exposure measurements that are required in the methodology are complex and not widely applied, which makes them relatively expensive at present. As positive health impacts from clean cooking interventions are dependent on several factors, it can be difficult to know whether the expected impacts are likely to be achieved or not. This guidance note seeks to remove some of this uncertainty by presenting selection criteria that will increase the likelihood of expected positive outcomes being achievable and certifiable.

### Objective:

The purpose of the guidance note is to make suggestions on decision making criteria that would help project developers and practitioners making informed decision on clean cooking interventions to achieve the intended impacts. The guidance note provides a set of high level criteria and associated indicators to shortlist the potential countries where implementation of clean cooking interventions would generate the greatest impact. The document also provides guidance on criteria that should be considered for technology selections and operational aspects of the project to certify health benefits using [Gold Standard Methodology to Estimate and Verify ADALYs from Cleaner Household Air](#) (hereafter ADALYs methodology).

### Methodology:

This document considers the action points starting with identifying potential locations, assessing the enabling environment in those countries hosting potential locations, moving on to selecting project technologies suitable for project implementation and operation to group the set of criteria and indicators. This is the suggested flow; however, the developer may change it as per his/her own discretion considering the status of decision making.

To help project developer applying the selection criteria an excel based database provides information on key indicators used for these criteria. However, it is recommended this database shall only be used for guidance purposes only, project developers and practitioners shall carry out their own due-diligence prior to decision making.

### Guidance on selection criteria:

The stepwise approach to apply the selection criteria is discussed in detail in following section.

#### Step -1. Shortlisting of potential locations:

The objective of the step 1 is to identify a shortlist of potential countries where implementation of the clean cooking intervention will have the greatest potential to generate significant health impacts. This can be achieved with a set of indicators that provides readily available information on status development of cooking practice and its health impacts.

#### Regions/ Sub region

If the developer has any preference for region/sub region due to the strategic mandate of the organization or any other reason, the developer should select the region and sub-region, before short listing the countries accordingly.

## Development Status

The developer should consider shortlisting the countries based on indicators such as “developed” and “developing” countries which indicates the level of development in the country and may be considered as a selection criteria. It would help shortlisting countries with high impact potential. For example, the lack of access to clean cooking fuel is more concentrated among poor countries, and poor people in middle income countries. Approximately 85% of those without access clean fuels and technologies for cooking, live in just 20 high impact countries<sup>1</sup>, mostly developing low income and middle-income countries in Asia and Africa region.

## Access to cooking fuel:

Subsequently, set of the indicators that provides information on existing cooking practice and access to clean cooking fuel should be applied. The suggested indicators for this purpose are listed in the table below.

Table. 1 Indicators for assessing the Access to cooking fuel

	Indicator	Source of information
i.	Access to non-solid fuels (%)	<a href="#">SDG Index</a>
ii.	Population using solid fuels for cooking (%)	

## Health impact of household air pollution:

The indicators used to assess the health impact of household air pollution are listed in the table below. These indicators provide information on the population exposed to household air pollution and severity of health impact in a country.

	Indicator	Source of information
i.	Number of people affected by household air pollution	<a href="#">Global Alliance for Clean Cookstove</a>
ii.	Number of household affected by household air pollution	<a href="#">Global Alliance for Clean Cookstove</a>
iii.	Household air pollution attributable deaths	<a href="#">WHO</a> , 2015
iv.	Household air pollution attributable DALYs	<a href="#">Global Alliance for Clean Cookstove</a>
v.	Prevailing death rate from household and ambient	<a href="#">SDG Index</a>

<sup>1</sup> The top 20 high impact counties that lack access to clean fuels and technologies are India, China, Bangladesh, Indonesia, Nigeria, Pakistan, Ethiopia, Congo DR, Vietnam, Philippines, Myanmar, Tanzania, Sudan, Kenya, Uganda, Afghanistan, Nepal, Mozambique, Korea DR, Ghana.

Adair-Rohani, Heather; Banerjee, Sudeshna Ghosh; Bonjour, Sophie; Portale, Elisa. 2014. *Tracking access to non-solid fuel for cooking*. Live wire knowledge note series; no. 2014/8. Washington, DC ; World Bank Group. <http://documents.worldbank.org/curated/en/867331468331258971/Tracking-access-to-nonsolid-fuel-for-cooking>

pollution (per 100,000)

The indicators on access to cooking fuel and health impact of household air pollution provide information on different aspects of household air pollution and can be used individually and/or collectively to assess the potential scale of clean cooking initiatives. For instance, population using solid fuels for cooking (%) and number of household affected due to household air pollution indicates the potential target population in a country. For example, around 67% of overall Indian households rely primarily on solid fuel for cooking; in rural areas, this figure is much higher at ~85%. It indicates that the overall clean cookstove market size in India is ~235 million households, more than the total market sizes of many other developing countries combined.<sup>2</sup>

Information on these indicators are readily available and frequently updated by international organization such as World Bank (WB), World Health Organization (WHO), UN Statistics, International Energy Agency's (IEA), Global Alliance for Clean Cookstove (GACC), SE4All. Also, a few of these indicators such as *Access to non-solid fuels (%)* and *Prevailing death rate from household and ambient pollution (per 100,000)* are part of SDGs indicator. The developer should refer to the latest information on these indicators to shortlist the potential countries.

#### **Subnational Indicators:**

After shortlisting the potential countries, the developer should also consider assessing the subnational situation on these indicators in the target country. For example, there are significant differences in energy use patterns among the different regions, and between urban and rural areas around the world. According to recent analysis, over 20% of urban households surveyed rely primarily on polluting fuels and technologies, while the ratio is reversed in rural areas, where around 80% rely on polluting fuels and technologies (WHO, 2015).

These statistics can inform the developer identifying a list of potential target countries and potential target area. These indicators will be helpful in broadly assessing the baseline situation and potential opportunity at country or subnational and further tailor project design with a combination of rural vs urban interventions to achieve the greatest impact on health.

#### **Step -2 Enabling environment:**

The ADALYs methodology is relatively complex and can be expensive to implement due to high costs involved for monitoring of changes to PM2.5 exposure with the use of clean cooking activities. Therefore, it is essential to assess the enabling environment in the shortlisted countries. There are several indicators which can provide information on current level expertise and infrastructure available for implementing cookstove interventions in a target country.

#### **Access to Carbon Finance:**

In past decade, clean cooking intervention have drawn on a wide range of public and private sources of finance using both compliance and voluntary carbon offset schemes. Like ADALYs methodology, the carbon offset project

- relies on result based financing approach where issued carbon credits (tCO<sub>2</sub>) are considered as a proof of outcome and delivery for payments. and
- follows similar project development requirements for clean cooking intervention

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<sup>2</sup> [http://cleancookstoves.org/resources\\_files/india-cookstove-and-fuels-market-assessment.pdf](http://cleancookstoves.org/resources_files/india-cookstove-and-fuels-market-assessment.pdf)

Although the sale of carbon offsets provides a valuable revenue stream, clean cooking projects aiming to access carbon finance face barriers due to complex certification process. Successfully implemented project using carbon finance serves a good indicator and provide information on level of expertise, infrastructure for example consultants, experts, auditors, and level of awareness for designing and implementation similar interventions in a target country. Though, there are individuals and organisations that provides services globally, but it leads to higher costs to developer. Therefore, the developer should assess the information on expertise available in the target country or region. The developer may refer to publically available sources; for example, Global Alliance [Carbon Finance Platform for Clean Cooking](#), which hosts relevant information on carbon finance based projects and relevant stakeholders.

### **Monitoring Expertise:**

ADALYs methodology requires personal exposure measurements (PEM) that are complex and not widely applied which makes them relatively expensive at present. The Gold Standard developed a reference manual on ADALYs methodology to assist the project developers understanding the requirements of methodology and provide the relevant information. This manual contains information methodology requirements, list of organization with PEM expertise and monitoring equipment. The developer should assess if the required expertise is available in the target country or the reason and plan accordingly.

### **Enabling Policies and framework:**

In several countries, the existing programme and policies provide a supportive policy framework for advancing clean cooking agenda. Existence of such policy and programme indicates likely availability of infrastructure to support for implementation of clean cooking intervention. The developer should review relevant information to access existing policy and related initiatives in target country to gauge the current situation.

Several countries have announced their commitment to focus on clean cooking initiatives. In this regard, the developer may refer to the initiatives such as GACC, SE4All, country's action plan for clean cookstove, national commitments for example; Intended Nationally Determined Contributions, Nationally Appropriate Mitigation Actions.

### **Step 3: Project designing:**

The project developer should consider the following criteria for designing a clean cooking intervention.

### **Technology Selection:**

The developer should consider several aspects while selecting the project technology. The new technology chosen for dissemination should meet the needs of the target population *and* should have low pollutant emissions.

The criteria such as performance of the technology, durability, fuel availability, user preferences and needs, cultural beliefs, user economic status and willingness to pay, etc. should critically assessed prior to start of the implementation. These factors play significant role in ensuring successful adoption of the project technology. Low adoption of the project technology leads to insignificant changes in exposure levels as compared to baseline situation and may not result in desired outcome.

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There are publically available sources which provides global database of cookstove, features, performance data including efficiency, emissions and safety based on laboratory and filed testing. For example, [Clean Cookstove Catalog](#) from Global Alliance for clean cookstove. Along with other criteria, the developer should assess the usage, and technology survival and durability for the planned project technology in the target population prior to undertaking the project. The user should also consider carrying out a pre-feasibility assessment with new technology to collect the user feedback and gauge the likely adoption of project technology.

## **Operational Issues:**

It is now widely recognised fact that existing fuel use and/or stove ‘stacking’ – the continued use of the old fuel and stove as the new one is adopted, is a common phenomenon among cookstove user. The number of ADALYs that can be awarded to a project depend on both the new technology substantially displacing baseline stove use and on the degree to which the new technology reduces PM2.5 emissions. Even if the project technology is very clean, if it does not substantially displace use of the baseline technology, the project may only be awarded a small number of ADALYs. Project developers should, therefore, only proceed to project implementation and monitoring after usage, stacking, and survival of the project technology is found acceptable.

As a general rule, the project technology may be considered acceptable if it displaces at least 80% of the baseline technology use and if less than 10% of households experience technology failure over the period monitored. The developer should device mechanism to discourage the use of old stoves, for example awareness programme to help understand the user benefit of new technology.

## **Conclusion:**

The ADALYs methodology requires personal exposure for quantifying the health impacts from clean cooking interventions. It involves a complex monitoring requirement, which could be relatively expensive. This guidance note suggests high level criteria to help project developers understand some of the likely barriers beforehand to increase likelihood of expected positive outcomes being achievable and certifiable. The criteria suggested in the document are for guidance purposes only, project developers and practitioners shall carry out their own due-diligence prior to decision making.