Beyond Distribution: Ensuring and Evaluating the Adoption of Clean Cooking and Its Benefits

Lima, Peru | May 4 - 5, 2015

Presentations from the workshop are available at:
cleancookstoves.org/AdoptionWorkshop

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Workshop Agenda (English)

Day 1 – Monday, May 4, 2015 – Las Plazas Ballroom

9:00 – 9:30 ***Morning Coffee*** *(Terrace, second floor)*

9:30 – 10:15 **Welcome and Workshop Inauguration**
Stella Hartinger ***Master of Ceremonies***
Universidad Peruana Cayetano Heredia

Patricia Garcia
Dean of the School of Public Health and Administration
Universidad Peruana Cayetano Heredia
Brian Smith
Chief Operating Officer
Global Alliance for Clean Cookstoves (Alliance)

Helen Petach
Senior Science Advisor
US Agency for International Development (USAID)

10:15 – 10:30 **Overview and Objectives** *Sumi Mehta, Global Alliance for Clean Cookstoves*

10:30 – 12:00 **Acceptability and Adoption of ICS in the Andes: The Peru Adoption Study (Panel)**
The Swiss Tropical and Public Health Institute and the Universidad Peruana Cayetano Heredia will present their results from their adoption study which sought to identify the key attributes that influence the acceptability and adoption of clean and safe cooking devices, using a socio-ecological framework, in rural Andean populations of Peru.

Donee Alexander, Alliance, Moderator
Daniel Mäusezahl, Swiss Tropical and Public Health Institute (Swiss TPH)
Stella Hartinger, Universidad Peruana Cayetano Heredia (UPCH)
Amy Powell, UPCH-Swiss TPH Health Research Platform

12:00 – 13:00 ***Lunch*** *(Terrace, third floor)*

13:00 – 14:30 **Behavior Change Communication for Cleaner Cooking (Panel)**
The USAID|Translating Research into Action Project (TRAction) will be hosting a panel discussion on the role of behavior change in the clean cooking sector. The panel, including several editors and authors involved in the supplement, will discuss how behavior change is defined in the field, key lessons that could be applied from other sectors, and suggestions for integrating behavior change into clean cooking efforts. Panelists will present findings from a recent supplement of the Journal of Health Communication on behavior change strategies to increase adoption of clean stoves and fuels, and highlight gaps and questions that remain.

Jay Graham, George Washington University, Moderator
Julia Rosenbaum, FHI360, USAID WASHPlus
Sumi Mehta, Alliance
Subhrendu Pattanayak, Duke University
Michael Johnson, Berkeley Air Monitoring Group

Debbi Stanistreet, University of Liverpool

14:30 – 14:45 **Updates**
Announcement of New USAID/Alliance-Funded Adoption Research Studies
Sumi Mehta, Alliance
Helen Petach, USAID

Report from New NIH Implementation Science Network *Josh Rosenthal, NIH*

14:45 – 15:15 **PAHO Implementation of Indoor Air Quality Guidelines** *Karin Troncoso, PAHO*
The new Indoor Air Quality Guidelines for household combustion will be presented at this session. The guidelines are designed to provide countries and implementing partners with practical information on the performance and characteristics of household combustion technologies and fuels needed to prevent negative health effects currently attributable to this source of air pollution.

15:15 – 15:30 ***Coffee Break*** *(Terrace, second floor)*

15:30 – 17:00 **Summary of Gender and Adoption Studies (Panel)**
The Alliance commissioned research to fill key gaps in the existing evidence on the impact that clean cooking solutions have on women users and their families, as well as data that provides a better understanding of the impact women entrepreneurs working in the cookstove and fuel value chain have on adoption rates. Panelists will discuss the results of research conducted in Kenya, South Asia, and the Andean region showing impacts on adoption, sales, income generation, education, time use, and drudgery.

Brian Smith, Alliance (Moderator)
Anita Shankar, Johns Hopkins University
Paola Mendez, Independent Researcher
Shanti Kleiman, Mercy Corps
Rafael Escobar, Practical Action

17:00 – 17:30 **Closing Remarks and Open Discussion Moderation** *Richard Grinnell, Alliance*

17:30 – 19:00 ***Reception*** *(Terrace, third floor)*

Day 2 – Tuesday, May 5, 2014 - Las Plazas Ballroom

9:00 – 14:00 **Working Session: Adoption Indicators**
This session will focus on defining adoption and developing a practical framework for implementers to use to measure and evaluate the range of potential benefits that can be achieved through adoption of clean cooking solutions. At present, programs generally use distribution / sales as a rough indicator of adoption, and no comprehensive framework to define or measure indicators of adoption has been developed.
The objective of this session is to start to build consensus around defining key indicators of 'adoption' and appropriate measures. While product design and production are critical to ensuring sustained adoption, given the expertise of the workshop participants, this session will focus primarily on policy, population /community level indicators of coverage, promotion, distribution and uptake, intensity of use, and sustained adoption.

Breakout sessions will provide an opportunity for participants to 'unpack' the indicators by specific subject area. The strengths and limitations of available techniques and tools for measuring adoption and stove use will also be discussed.

9:00 – 9:20 **Introduction, Overview and Objectives** *Sumi Mehta, Alliance*

9:20 – 9:45 **Sample Frameworks from WASH and Cookstoves**
Jay Graham, GWU

9:45 – 11:00 **Breakout Sessions: Unpacking the Indicators**

- Table 1 Policy: *Grinnell, Moreno*
- Table 2 Promotion, including Population and Community / Coverage: *Mehta, Rosenbaum, Bashin, Pillarisetti, Cabezudo, Castro*
- Table 3 Distribution and Uptake: *Petach, Tully, Powell*
- Table 4 Intensity of Use: *Alexander, Troncoso, Ruiz, Stanistreet, Hartinger, Johnson*
- Table 5 Sustained Adoption: *Rosenthal, Graham, Kumar, Mäusezahl*

11:00 – 11:30 ***Coffee Break*** *(Terrace, second floor)*

11:30 – 13:00 **Techniques and Tools for Measuring Adoption and Stove Use**
This session will focus on the various tools available for measuring stove use including discussion on Stove Use Monitors (SUMs) and other available technology currently being used in the field.

Donee Alexander, Global Alliance for Clean Cookstoves, Moderator
Ilse Ruiz-Mercado, Universidad Autonoma de Mexico
Ajay Pillarisetti, University of California-Berkeley
Tara Ramanathan, Nexleaf Analytics
Michael Johnson, Berkeley Air Monitoring Group

13:00 – 14:00 ***Lunch*** *(Terrace, third floor)*

14:00 – 15:00 **Report Back on Breakout Sessions and Discuss**

Day 2 Cont. – Tuesday, May 5, 2015 – Las Plazas Ballroom

15:00 – 15:15 ***Coffee Break*** *(Terrace, second floor)*

15:15 – 16:30 **Practical Determinants of Impacts with a Focus on Implementers**
In this session we will focus on how best to estimate the potential benefits that can be expected with sustained adoption of various clean cooking solutions. Beyond measures of adoption, the discussion will consider the expected performance of the technologies being brought to scale, as well as the influence of practical aspects of measuring vs. modeling benefits, with a focus on health and environment/climate.

16:30 – 17:00 **Summary and Next Steps** *Sumi Mehta, Alliance*

17:00 **Adjourn**

Overview and Objectives

On May 4th and 5th, 2015, the Global Alliance for Clean Cookstoves, the Universidad Peruana Cayetano Heredia (UPCH), the USAID Translating Research into Action (TRAction) Project and the Swiss Tropical and Public Health Institute (Swiss TPH) co-organized a two-day workshop on adoption of clean cooking in Lima, Peru. The purpose of the workshop was to engage key stakeholders to determine how to move from distribution to adoption of clean cooking technologies, how to define adoption and measure progress towards it. Over 75 stakeholders from implementing agencies, carbon project developers, government ministries, NGOs, international organizations, evaluators, and research/academia worked together to determine how to move beyond a focus on distribution towards defining and measuring progress on adoption of clean cooking technologies. Workshop sessions shared the results of recent adoption studies, highlighted recently published evidence on the role of behavior change communication (BCC) and gender in enabling. The workshop also included intensive working sessions focused on defining adoption and developing a practical framework for implementers to measure and evaluate the range of potential benefits that can be achieved through adoption of clean cooking solutions.

Presentation Summaries

Acceptability and Adoption of Improved Cookstoves (ICS)[1] in the Andes: Peru Adoption Study Panel

This panel presented the results of the Swiss Tropical and Public Health Institute and Universidad Peruana Cayetano Heredia's adoption study. Their adoption study objectives were to identify key attributes that influence acceptability and adoption of clean and safe cooking devices using a socio-economic framework.

History & Background of Environmental home-based interventions research in Cajamarca 2007-2015

Daniel Mäusezahl, Swiss Tropical and Public Health Institute

The first presentation of this panel covered the background of Swiss TPH's work in home-based interventions to improve household health via ICS, clean water access and improvements in early childhood development. It set up the Peru Adoption Study by reviewing the approaches used, its objectives and scope.

Highlights

- **Adoption is a process** that starts with user acceptance of the ICS model
- Asking respondents survey questions like "Do you have an ICS where you live?" "Do you use the ICS? Do you use it every day?" etc. still does not tell us if the respondents' behavior represents adoption, sustained use, sustained adoption, etc.

Defining adoption and identifying enablers and barriers in the Peru trial

Stella Hartinger, Universidad Peruana Cayetano Heredia (UPCH)

1 'Improved cookstoves' (ICS) and 'clean cookstoves' (CCS) are used in this report consistent with the way in which they were used by presenters in the workshop.

This presentation included how the Peru Adoption Study defined adoption and identified the enablers and barriers to adoption. Barriers and enablers were identified at the personal, household, community, institutional and policy levels. The various factors at play in the adoption process, including social and cultural factors, that influence acceptability and adoption of ICSs, were reviewed. The current level of ICS presence, use, and performance were also assessed and shared.

Highlights

- In this study, sustained adoption is achieved when all indicators below are positive
    - Frequency of use: ICS is stated as primary (gas stove stated as primary or secondary)- used more than 50% all cooking activities
    - Condition of stove: functioning correctly without problems
    - Willingness to Pay/invest (WTP): new stove or new parts
- **WTP is key**- the inclusion or exclusion of WTP in the definition of adoption causes significant variation in your results- excluding it adds a positive bias
- Enablers, barriers, interventions and indicators have different levels of significance and influence at different stages within the adoption process i.e. are context specific and dynamic

Application: Improving ICS implementation

Amy Powell, UPCH-Swiss TPH

This presentation introduced the Socio-Ecological model (SEM) and the Behavior Economic model (BEM). The application of these models to implementation efforts avoid biases and ensure that changes observed are validated and evidence-based. These models also help to define, diagnose, and design solutions across various intervention levels during implementation.

Highlights

- Frameworks avoid biases/assumptions, ensure change is validated and evidence-based
- SEM model helps identify enablers and barriers and organize them based on their level of influence
- BEM approach helps to define, diagnose and design effective solutions to problems and promotes systems thinking in the field
    - Why people behave in certain ways and make the decisions they make
    - Identify what behavior is to be influenced and understand the context
    - Solution design should be EAST (easy, attractive, social, timely)

Overall Discussion- Peru Adoption Study Panel

- **Willingness to Pay (WTP) is not universally accepted as essential to define adoption**
    - Many questions and comments challenged the notion that an ICS must be paid for in order for it to be used and its adoption sustained as well as raised concern over the role poverty plays as a barrier to acquisition
    - The responses of the panelists included the fact that most payments for interventions like mosquito nets or ICS are so nominal that vulnerable populations can afford them. When interventions like these are free the effort to maintain use increases drastically. The point was also made that even in impoverished communities people purchase cell phones so it's possible that if ICSs are appealing enough and there are enough options and models to choose from the market for them will grow

    - A key question was: Do people pay for something and sustain it because they see returns, or do they sustain it because they pay for it?
- **The participation level of end users in ICS design was questioned and challenged**
    - Participants expressed that users do not have enough valid experience to reference when determining the design of an ICS especially as it relates to efficiency needs
    - The panelists' cited the fact that in their study, all of the ICSs presented to users to choose from were certified beforehand so any ICS that was chosen by their users to be distributed in their clean cooking program had already been certified. This process helps to involve the community and ensures the program is building and distributing an ICS the target audience will actually use
- **External factors that influence adoption: Maintenance costs and supportive national programs**
    - Participants expressed concern that expensive replacement parts will cause users to only use the clean stove until the end of its lifecycle. Other concerns were that if we make too many recommendations for how to use the stove and why, users will perceive it as too complicated and will use their traditional stove
    - Panelists responded that using local materials is important and they found they had to go back and repair stoves in their study because users did not. Maintenance is essential but difficult even when materials are local. It is still a weak area
    - How does liquid petroleum gas (LPG) access promote uptake in the Peru Adoption study?
    - Panelists responded that although users liked and use the gas stove from the existing national program in Peru, the higher price of gas and changes in food taste deterred them from adopting it as the primary stove. However, these gas stoves are considered the secondary stove after the ICS and have helped displaced the traditional fire as the primary and secondary stove which is a positive step forward

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Behavior Change Communication for Cleaner Cooking Panel

This panel presented research on the role of behavior change in the clean cooking sector. Panelists presented findings from a recent supplement of the Journal of Health Communication (volume 20, supplement 1, 2015) on behavior change strategies to increase adoption of clean stoves and fuels. Presentations also highlighted key research gaps and questions that persist on BCC for clean cooking solutions

Behavior Change Approaches to Facilitate Clean Cooking and Reduce HAP

Julia Rosenbaum USAID WASHplus/FHI360

This session focused on the role of behavior change in the clean cooking sector including lessons from other sectors. Julia Rosenbaum presented on behavior change approaches used by WASHplus that can be applied across the value chain from users in households to policymakers and stove producers. The framework WASH uses to help build their hypothesis of change and examples of practical interventions were shared.

Highlights and Discussion

- All clean cookstoves (CCSs) were found to be good stoves by users but none of the stoves were found to meet ALL of the consumer needs. Stove stacking is a persistent issue
- WTP was low but when acquisition barriers were removed, the stoves were valued by users

- Some perceived problems with the CCS and their solutions were a product of insufficient user knowledge e.g. some users felt the flames need to be high and needed to touch the pot in order to cook food correctly
    - However, sufficient knowledge of CCS use was found to be necessary but not sufficient for adoption
- Improved health is rarely the strongest motivator for behavior change
- "Shrink the behavior" i.e. don't reach for the ideal but for the most impactful and feasible change for your target audience

Advancing Communication and Behavior Change Strategies for Cleaner Cooking

Sumi Mehta, Alliance

This presentation highlighted the critical need to reduce HAP as it is one of the top global health risk factors. It described why health communication and behavior change communication are so critical to our shared ultimate goal of saving lives. The increase in clean cooking programs that incorporate theoretical foundations and frameworks to strengthen their initiatives was reviewed.

Highlights

- Sustained adoption of clean cooking that is sufficient enough to save lives requires behavior change communication (BCC)
- While public health is a policy driver, it is not a sufficient motivator for behavior change and increased access to clean cooking is not enough to achieve sustained adoption at the user level
- The Journal of Health Communication article covers drivers and barriers to acquisition and use of clean cooking technology, research methods and frameworks to evaluate effectiveness, acceptability, and design

Piloting Improved Cookstoves in India

Subhrendu Pattanayak, Duke University

The objective of this project was to explore if social marketing can help us in disseminating improved cookstoves (ICS). India partners, including TERI, Gram Vikas, and CHIRAG conducted 8 pilot studies using a mixed methods approach in 3 states of India with a sample size of 120 households. Three types of stove technologies were assessed: a natural-draft biomass stove, a forced-draft biomass stove, and an electric coil stove.

Key Findings

- BCC techniques with door to door demonstrations with information pamphlets were effective
- When given a choice, households strongly preferred an electric stove over improved biomass-burning options
- Time savings are particularly valued for the users
- Households identified price as a significant barrier to adoption
- Place based factors such as remoteness and NGO operations significantly affected the ability to supply and convince households to buy and use the ICS

Highlights and Discussion

- Although all stoves reduced HAP, few people were willing to pay anything close to market value for stoves

- There is no-one-size-fits-all solution. Adoption of stoves is strongly a function of economic and social imperatives of communities

The role of Mixed Methods in Improved Cookstove Research

Debbi Stanistreet, University of Liverpool

The objective of this study was to explore the role of mixed methods in ICS research, using a mixed methods ICS study in Kenya. The project used a case oriented approach and a convergent study design model. For convergence analysis, two groups of HHs were selected:
Group A: 6 HH with large reductions with ICS. Group B: 6 HH with small/no reductions with ICS.

Key Findings

- Rankings of stove did not necessarily lead to exclusive use
- Stove stacking is a major issue in both the groups
- Triangulation of data (self-reporting vs. SUMS) indicate over-reporting in time-activity diary
- Group A (with greatest PM2.5 reductions) showed continued use of new stoves
- Complying with study requirements was a motivating factor regardless of vies on stoves

Highlights and Discussion

- Independent use of quantitative or qualitative methods are inadequate in gauging relationship between users' perspective and ICS use
- Mixed methods are significant in highlighting both causality and context significant for ICS adoption

Guidance for linking stove usage with impacts

Michael Johnson, Berkeley Air Monitoring Group

This presentation described how qualitative and quantitative teams worked together to better integrate qualitative and quantitative data to better understand the relationship between user acceptance and user behavior. A convergent analysis approach was used to assess the differences in perceptions and use to determine how acceptable CCSs are to users. Findings shed light on the degree to which traditional stoves need to be displaced and how much CCSs need to be used to meet International Organization for Standardization (ISO) and World Health Organization (WHO) guidelines. The presentation included a guide on how to integrate performance-usage data into program implementation efforts.

Key Findings

- It takes very little traditional stove use to exceed WHO Indoor Air Quality Guidelines (IAQG), similarly, even with high usage of CCSs it is difficult to reach WHO IAQGs unless the traditional stove is almost completely displaced i.e. **displacement of traditional stoves is crucial**
- Household ventilation has significant impact on indoor air quality- Tier 3 stoves estimated to reach WHO iAQGs only at high ventilation rates and when completely displacing the traditional stove
- In the Uganda study, community cooking demos by trained community health workers and increasing access to processed fuel were successful interventions while cost to manufacture CCSs and incompatibility with cooking practices were barriers

Overall **Discussion: Behavior Change Communication Panel**

- We need to **confirm the product is adequate and meets all the user needs before investing resources in behavior change** interventions
- We may need to consider stove stacking as a potential value to incorporate into our offer and BC interventions
- How much air exchange is realistic for a household?
    - Ventilation alone is not sufficient, 25-30 air exchanges per hour plus a high performing stove will reduce relative risk

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PAHO Implementation of Indoor Air Quality Guidelines

Karin Troncoso, Pan-American Health Organization

In this presentation Karin Troncoso reviewed the new WHO Indoor Air Quality Guidelines and their implications for the level at which CCSs need to perform and the degree to which they need to be adopted to meet the WHO goals. The presentation gives a breakdown of various scenarios of traditional and CCS use and the number of hours per day and per week each would need to be used to meet WHO goals including the type of CCS needed in each scenario.

Highlights and Discussion

- In order to meet the WHO's intermediate goal a traditional stove can only be used for 10 minutes/day or 2.5 hours per week
- In order to meet the WHO's ultimate goal, traditional stoves can only be used 30 minutes/week- essentially, **traditional stoves need to be completely displaced**
- The WHO goals are ambitious because they are based on the rates of use that will truly enable the health benefits desired
- To reduce exposure by 50%, the difference in emitted pollutants from tier 3 vs tier 4 stoves is nominal because the exposure from use of the traditional stove is so high
    - To mitigate this, the traditional stove can be moved outside to reduce some exposure (however this does not help outdoor air quality or other environmental goals and allows community exposure to persist)

Summary of Gender and Adoption Studies

This session presented research on the role of gender in providing clean cooking solutions. Presentations included impact of women entrepreneurs on adoption rates. Panelists discussed results of their research conducted in Kenya, South Asia, and the Andean region showing impacts on adoption, sales, income generation, education, time use, and drudgery.

Agency-Based Empowerment Training Enhances Sales Capacity of Female Energy Entrepreneurs in Kenya

Anita Shankar, Johns Hopkins University School of Public Health

Study objectives

- If given equal opportunity, are female entrepreneurs as effective as male entrepreneurs in selling ICS in rural and urban sites in Kenya?
- Does the agency-based empowerment training improve effectiveness of ICS entrepreneurs when compared with standard entrepreneurial training?
- Does the gender of the ICS seller affect adoption practice?

It was a randomized control study design with a total sample size of 310 (females: 204, males: 106).

Key findings

- If given equal opportunity in the Kenyan context, women sell ICS more effectively than men
- High seller entrepreneurs were nearly twice as likely to be females
- Those entrepreneurs that received the agency-based empowerment training were nearly 3 times more likely to be high sellers of ICS
- If a woman sells the ICS (compared to male ICS sellers), adoption and perception of the value of the ICS is significantly better

Highlights and Discussion

- The participants exhibited some business characteristics as was evident in the results of their psychometric tests
- The research team has developed a handbook to support small and micro – female entrepreneurs. The book integrates gender sensitive business training, empowerment, and leadership components
- The book can be accessed on https://cleancookstoves.org/resources/342.html

Women as Agents of Change - Experience in the Andean Region

Paola Saldivias Mendez, Consultant in Communication for Development & Empowerment

Study objectives

- Explore how ICS use reduces opportunity costs and provides more benefits
- Impact of comprehensive training on women as agents of change
- Impact of empowerment and leadership integrated training for women
- Explore the role of women in the value chain network

Data were collected through surveys, interviews and focus groups. Information was triangulated with extensive literature review.

Key findings

- Improved health: decreased discomfort, including coughing, headache and irritation of the nose, eyes and throat
- 85 % of women in the sample indicated saving time by using ICS
- Comprehensive training are innovative strategies to motivate women to use ICS
- Integrated training (comprising empowerment and leadership skills) enhanced participation of women and led to increased demand for ICS and clean cooking solutions

Highlights and Discussion

- Participatory study design helps to receive pragmatic insights on the issue.
- Women's social networks have significant potential to disseminate awareness on clean cooking solutions

What Motivates Women to Buy? Valuing, Understanding and Targeting Women for Improved Cookstoves Purchase in East Acholi, Uganda

Shanti Kleiman, Mercy Corps

Study objectives

- Identify motivations, barriers, and enabling factors that contribute to and inhibit female consumers from purchasing improved stoves
- Develop and test sales, marketing, and finance strategies tailored to trigger adoption among female consumers.
- Build a business case for investing in female consumers

The study was an 11 week qualitative research in partnership with 5 East Acholi (Uganda) based ICS retailers. Focus groups with 70 respondents and individual interviews with 47 respondents were conducted. Data were collected at time of purchase with a post-purchase follow-up

Key findings

Users' profile

- Urban, female charcoal users with some independent source of income were most likely to purchase ICS
- Small women business owners, salaried employees, and savings group members have access to cash to purchase ICS

Market strategy insights

- Establish multiple sales points in major markets where women frequent most.
- Disseminate message of time saving benefits associated with ICS use.
- Build a local, female, commission-based sales force

In the discussion following, following point was highlighted:

- There is a need for more research to explore the consumer segment of women who rely on husband's income and households which are dependent on agriculture

Impacts of improved cookstoves on gender and livelihood in South Asia

Rafael Escobar, Practical Action

In this presentation the results of a study conducted in India, Nepal, Bangladesh and Pakistan on the impacts of CCSs on gender and livelihoods are reviewed. Rafael Escobar discusses the role of women in cooking practices, fuel use and stove type and how their specific needs are central to achieving adoption.

Highlights and Discussion

- Addressing women's needs are fundamental to successful adoption of CCSs
- Cooking is a culturally sensitive issue- without understanding this, even the best technology will fail
- Key factors that influence the outcome of analysis: income, size of family, education, food customs and cooking methods, stove price, types of traditional stoves, occupation
- When women are engaged in the value chain, women's confidence increases and they can educate their children, other women and raise awareness in the community and drive demand for CCSs
    - Barriers to this are the restriction of women to the household only

Sample Framework from WASH and Cookstoves

This session presented research on models, frameworks and behavior change techniques to foster adoption, maintenance and use in water and sanitation sector. Strategies from water and sanitation sector were presented as potential leverage points for the ICS sector. Panelists also discussed ways to develop framework so as to measure and evaluate behavior change of users.

Behavior Change: Frameworks, Models and Techniques

Jay Graham, George Washington University

Highlights and Discussion

- Frameworks to improve adoption, maintenance, and use include:
    - Strengthen supply of technologies
    - Strengthen demand of technologies through social marketing or awareness campaigns.
    - Create an enabling environment for improvement
- No specific theory/model can explain overall behavior change of users. Systematic review of existing models and frameworks in water and sanitation sector can be reviewed in Dreibelbis et. al., (2013)
- SaniFOAM is a framework to analyze sanitation behaviors to design effective sanitation programs. SaniFOAM categorizes sanitation behavioral determinants under 4 headings:
    - **Focus** of the program: target audience and behavior(s) that are needed to be adopted
    - **Opportunity** for change: chance/opportunity for the target audience to change within the social and physical setting
    - **Ability** to change: capability of target audience to undertake the behavior change
    - **Motivation** to change: readiness of the target group (based on experiences and competing priorities) to carry out the behavior change

It is important to develop standardized definitions of techniques used in behavior change interventions, which help in replicability of effective interventions across sectors. Systematic review of behavior change techniques are available in Abraham, C., & Michie, S. (2008).

Techniques and Tools for Measuring Adoption of Stove Use Panel

This panel focused on the various tools available for measuring stove use including discussion on Stove Use Monitors (SUMs) and other available technology currently used in the field.

Critical Implications of Fuel-Device Stacking or Initial Diagnosis, Monitoring and Evaluation of Stove Programs

Ilse Ruiz-Mercado, Universidad Autonoma de Mexico

This presentation dived into the rationale for monitoring and measuring usage in the context of stove-stacking. The presentation detailed various cooking tasks, which are completed with which type of stove, the frequency at which each task is performed and the amount of time each task consumes. Incorporation of these critical details around cooking tasks and timing into designing a clean cooking program is crucial to achieve real impact.

Highlights and Discussion

- **Sustained adoption is a complex and dynamic process** embedded in other processes of social change and begins with acceptance
- Imperfect substitution leads to residual use of traditional fires/stove
    - Stoves used for more than cooking
    - All cooking tasks have specific and sometimes contrasting demands for temperature, cooking times, fuel rate and type, cooking vessel type, etc. Each task has a different "weight" or cultural importance
    - Stacking is also a livelihood strategy and allows household to manage uncertain income, differences/changes in fuel prices, changes in access to or availability of fuels and stove repairs over time as conditions fluctuate
- The mixture of cooking tasks conducted simultaneously are complex, constant throughout the day
- Each fuel-stove type combination meets a specific niche or cooking task and are generated based on household and community contexts and seasonal changes
- A "portfolio" of options for fuels, stove types and cooking tasks/practices is needed to fully displace traditional stoves- clean cooking program solutions must embrace stove stacking

Supporting Program Implementation and Evaluation with Stove Usage Data

Michael Johnson, Berkeley Air Monitoring Group

This presentation covered how to connect stove usage and programmatic impacts, how to integrate stove usage with additional data sources and how to coordinate programmatic needs with stove use monitoring. The impact levels that can be achieved by different stove types and the realities of their distribution are discussed as well as how to make meaningful impact even if the WHO goals cannot be reached are discussed.

Highlights and Discussion

- Balancing stove usage and performance is key to maximizing household level impact
- Moving from tier 1 stove usage with 0% traditional stove displacement to tier 3 stove usage with 75%+ displacement of traditional stoves still yields meaningful benefits, while the desire is to get all households using a tier 4 stove, it is difficult to make this transition for many populations within a reasonable timeframe which is prohibitive of some of the benefits that can be achieved in the meantime by moving from tier 1 to tier 3 stoves and increased displacement of traditional stoves
- Combining usage data with survey data can provide insight into stove-cooking task associations and user perceptions/acceptance of stove
- Combining usage data with air quality data can segregate impacts of specific stoves and specific stove combinations and their contributions to particulate matter

Extending the Stove Use Monitoring System: Updated hardware and software

Ajay Pillarisetti, University of California-Berkeley

This presentation focused on expanding the usage of stove use monitors and provides an introduction to the new and improved models, their applications and the increase in ease of use and accuracy they provide. The costs factored in with each new model's capabilities and lifespans are also covered.

Highlights and Discussion

- Valid data on traditional stoves is difficult to obtain due to the physical construction of both the stoves and the most commonly used iButton
- 3 types of stove use monitors:
    - iButton: mounted directly on stoves
    - Infrared thermometer: mounted in homes near stove or fire
    - Thermal couple data logger SUM: battery powered, programmable, rechargeable- mounted on the stove- can sit next to an open fire

Wireless Sensors to Understand and Improve Stove Use

Tara Ramanathan, Nexleaf Analytics

This presentation introduced the technology, tools and services provided by Nexleaf Analytics for utilizing wireless cookstove sensors, accessing cooking activity data and analyzing it. A study comparing the survey responses of three different groups divided by their CCS usage level to their actual usage recorded by the wireless cookstove sensor illustrated the importance of understanding actual versus perceived CCS usage.

Highlights and Discussion

- Nexleaf's StoveTrace program allows log in access to assess real-time cooking activity of any household with a wireless cookstove sensor installed
- Survey respondents will say they like the CCS and why, but the usage data does not always support their responses
- Many survey respondents were found to be unaware of the health impacts of traditional stove use when surveyed
- Overall trends in responses from each survey group divided by CCS use:
    - Low use group expressed not wanting to cut the fuelwood as small as needed for the CCS and to constantly feed the stove with fuel
    - Medium use group did stove stacking
    - High use group- had more time to cut the wood smaller and constantly feed the stove- only 2 people in the HH
    - All users said if they were given chopped wood, they would use the CCS more

Breakout Sessions: Unpacking the Indicators

This session focused on defining adoption and developing a practical framework for implementers to measure and evaluate the range of potential benefits that can be achieved through adoption of clean cooking solutions. The objective of this session was to build consensus around key indicators of 'adoption' and 'appropriate measures'. Through parallel sessions, we developed indicators across the value chain (from promotion to sustained adoption) as shown in Figure 1.

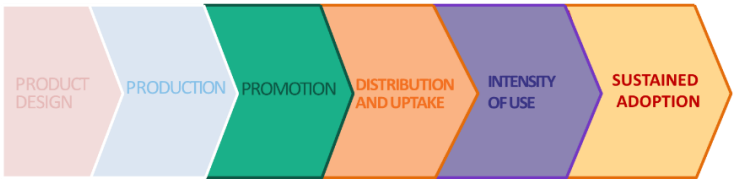

Figure 1: Product Value Chain from Design to Sustained Adoption

Discussion was concentrated over the following 4 heads for each of the concepts of the value chain:

- **Indicators:** Approximates the state of what we are interested in a useful way
- **Potential Metrics:** Directly measures indicators by using a standardized unit, system, or approach. Instances are: ISO, performance tiers
- **Quantitative methods:** counting, **Qualitative methods:** standard interview and focus group approaches
- **Measured at what scale (unit of analysis):** Individual, household, institutional, community, national, and global levels

Policy and Coverage[2]

Definition

Policy: Joint implementation by public and private actors (business and civil society) to promote, facilitate, frame, install, and sustain use of clean cooking technologies activities.

Coverage: Extent of access to information and technology options and/or culturally acceptable and economically viable clean fuels for families who cook with biomass, coal, manure, or other polluting fuels.

What factors are critical to the definition of policy and coverage?

- Political decision

[2] Policy and Coverage are not indicated in the Value Chain. However, they are important drivers of sustained adoption and thus their definitional framework and indicators are equally significant.

- Inclusion in multi-year strategic and national development plans
- Shaping public private partnership to achieve the thematic continuity
- One Person, sector or ministry to lead and drive the policy, coordinate, and delegate
- Means available and allocated
- Identification of key players and definition of roles and responsibilities
- Monitoring and recording progress
- Certification of technologies in laboratories and in fields
- Accountability in terms of resources and time

How do policy and coverage directly contribute to adoption?

- They ensure that the government make norms and facilitator but not implementer
- They ensure cross- sectoral integrated actions to disseminate information and promote education of the general population
- They ensure mechanisms to allow consumers to enforce guarantees and rights
- They promote development of technologies and fuels market
- They regulate quality and functionality of technologies and business plans

Table 1

Indicators	Potential Metrics	Qualitative or Quantitative	Measured at what scale
Increase in number of funded policies that promote clean cooking solutions	• Policies exist/no Policies • # policies	Qualitative and Quantitative	National, global
Increase in inclusion of clean cooking policies in annual plans and programs	• Included/Not Included • # inclusions	Qualitative and Quantitative	National, global
Increase in enterprises involved in technology and fuel dissemination	• Number of enterprises involved	Quantitative	Community, national, global
Presence of quality and guarantee mechanisms	• Exist/do not exist	Qualitative	Community, national, institutional, global
Presence of M&E mechanisms to measure % adoption	• Exist/do not exist • usage rate (yearly, biannual)	Qualitative and Quantitative	Community, national, institutional, global

Promotion

Draft Definition
"Reach" or adoption of clean cooking technologies within key geographic areas or population segments. Demand for clean stoves/fuels is created at the household level. At the individual and community level, it shows actions to inform, motivate, and raise awareness on clean cooking to generate demand and sustain correct and consistent use.

Updated Definition
Sharing of information and creation of motivation to adopt healthy behaviors in food preparation by generating correct and sustainable demand and use of ICS. At the individual and community level, it shows actions to inform, motivate, and raise awareness on clean cooking to generate demand and sustain correct and consistent use.

What factors are critical to the definition of promotion?

- Ignite and sustain clean cooking as community norm, harness community norms to maintain desired behavior
- Create social expectations of behavior and use of opinion leaders
- Create demand for clean technology and for cooking behavior that protect health
- Emphasis on family and community levels
- Identify and offer desired benefits for audience
- Consumer protection, labeling, and standards to assure confidence in the technology
- Distribution does not equal use. Awareness should create motivation for sustained demand and use

How does promotion directly contribute to adoption?

- The decision to embrace clean cooking is a strong community decision that impacts individuals
- Explains the benefits of adoption
- Addresses opportunity, motivations and barriers to adoption and use
- Influences society through laws.(consumer protections, quality assurance, safety)
- Community norms help maintain desired behaviors

Table 2

Indicators	Potential Metrics	Qualitative or Quantitative	Measured at what scale
Increase in knowledge level and attitude on clean cooking	• # persons aware about clean cooking • # families informed • # of people who can name actions and benefits	Qualitative and Quantitative	HH, community
Increase in stove sales over time	• sales numbers • stoves accepted (subsidized) • # families maintaining clean stoves and replacing traditional stoves	Quantitative	HH, community
Presence of government support and involvement	• consumer protections (laws, regulations) exist/do not • # organizations supporting for clean cooking solutions	Qualitative and Quantitative	HH, community, national
Presence of organizations' PPP that promote change	• Integration of safe cooking messages and education into ongoing programs • # promoters incorporating user perspectives in promotion • # organizations promoting change (educational sessions and outreach) • # CBOs that include clean cooking as a goal	Qualitative and Quantitative	National
Increase in public & private investment in promotion	• program plans exist/do not exist • dedicated resources for clean cooking • integrated programming or initiatives	Qualitative and Quantitative	Community, institutional, national
Increase educational institutions focusing on clean cooking solutions	• research on consumer preferences • promotion of community adoption • clean cooking integrated into educational programs	Qualitative and Quantitative	Institutional

Distribution & Uptake

Draft Definition
The volume of clean stoves/fuels sold, disseminated, purchased, and/or initially used.

Updated Definition
Distribution: Mechanism for stove access (for stoves that meet the needs of users), with continuous availability, access to parts, and repair services.
Uptake: Presence of a functional stove in a household (not necessarily in use); no indication of how the stove arrived in the household; may include multiple stoves.

What factors are critical to the definition of distribution & uptake?

- Avenues that can be used to get improved cookstoves (ICS) into communities - the avenues that allow consistent access to ICS
- ICS are consistently available and their parts and repair services are also consistently available
- Once the ICS is in the HH, uptake is complete

How does distribution & uptake directly contribute to adoption?

- Must have access to stoves before adoption can take place
- Knowing/understanding the existing landscape of energy access on the ground and supportive infrastructure for energy (or ICS) in a specific region will be key to distribution
- Creating a map of regions and maps of existing ICS use (as done by FISE (Fundo de Inclusion Social Energetico))
- Need to identify who is providing the ICS and repair services
- When stoves are portable it is very difficult to track where they end up. For instance, some people purchase them and then give them to another family member
- Uptake will be low if consumers do not like the product. This is irrespective to the accessibility of the ICS

Table 3

Indicators	Potential Metrics	Qualitative or Quantitative	Measured at what scale
Presence/increase in # stove vendors/providers	• Stove vendors present/not • # of stove vendors/providers	Qualitative and Quantitative	Community, institutional, national
Presence/increase in # fuel vendors/providers	• Fuel vendors present/not • # of fuel vendors/providers	Qualitative and Quantitative	Community, institutional, national
Presence/increase in # artisans	• Artisans present/not • # of artisans	Qualitative and Quantitative	Community, institutional, national
Presence/increase in vendors/providers of stove parts	• Vendors/providers present/not • # of vendors/providers	Qualitative and Quantitative	Community, institutional, national
Increase in # stove vendors/providers/builders (per number of users)	• # of vendors/providers per number of users	Quantitative	Community, institutional, national
# users aware about their vendors/providers	• Users aware/not aware • # users	Qualitative and Quantitative	HH, community, national
# users who agree that available stoves and fuels meet their need	• Users agree/do not agree • # users	Qualitative and Quantitative	HH, community, national
# users satisfied with stoves/services for stoves	• Users satisfied/not satisfied • # users	Qualitative and Quantitative	HH, community, national
Increase in # stove sales per week per vendor/provider (capacity of the vendors)	• Sales numbers	Quantitative	HH, community, national
Presence/increase in # vendors/providers who are women	• Women vendors present/not present • # of women vendors/providers	Qualitative and Quantitative	HH, community, national
# repair staff who are women	• Women repair staff present/not present • # of women repair staff	Qualitative and Quantitative	HH, community, national
Presence of stove finance	• Mode of finance options (subsidies, free, microfinance)	qualitative	HH, community, national
Increase/presence of willingness to have, maintain, and pay	• Time • Self-commitment	Qualitative and Quantitative	HH

Intensity of Use

Definition
The degree to which clean stoves/fuels have displaced traditional stoves for household cooking purposes.

What factors are critical to the definition of intensity of use?

- Degree to which the traditional stoves have been displaced.
- Type of stoves (primary, secondary or tertiary stoves) that have replaced the traditional stove and how often are each being used

How does intensity of use directly contribute to adoption?

- Positive impacts associated with cleaner stoves and fuel use are not realized if new stoves do not displace traditional ones at high rates

Table 4

Indicators	Potential Metrics	Qualitative or Quantitative	Measured at what scale
Increase in clean stoves displacing traditional stoves	• Minutes per day that each stove in the house is being used • Days per week the stove is being used at X minutes • Meals or cooking events cooked with clean stoves/fuels per day • Household c*onsider clean stoves* their primary stove (and secondary if possible)	Qualitative and Quantitative	HH, community, national
Increase in the purchase of clean fuel	• Sales data/surveys for frequency of clean fuel purchase • Sales data for amount of fuel purchased	Qualitative and Quantitative	HH, community, national

Sustained Adoption

Definition
The degree to which clean cooking is integrated in daily behavior of users with no intention of reverting to traditional stove/fuel use.

What factors are critical to the definition of intensity of use?

- Initial acceptance and willingness to continue and invest
- Investment entails money and self-commitment to sustained use
- Time period
- Understanding of community and cultural contexts

How does sustained adoption directly contribute to adoption?

- Sustained adoption is not complete without uptake and sustained use
- There is a distinction between initial acceptance and sustained adoption
- Adoption may be "daily use of stoves"
- Sustained adoption is a function of daily use, intensity of use and other contextual (community, culture, institutional, external) factors
- Sustained adoption shows that "users do not want to go back to use traditional stoves"

Table 5

Indicators	Potential Metrics	Quantitative & Qualitative	Measured at what scale
Increase/presence of willingness to have, maintain, and pay	• Time • Self-commitment	Qualitative and Quantitative	HH
Increase in demand for maintenance and replacement	• Investment (repair or replacement)	Qualitative and Quantitative	HH, community
Increase in local support	• No. of local experts available • Presence of sales and supply chain • Local availability of parts	Qualitative and Quantitative	Community, institutional
Awareness of benefits	• Knowledge level of benefits	Qualitative	HH, community
Change in stacking behavior	• Increase in use of cleaner stoves relative to traditional stoves	Qualitative and Quantitative	HH
Time period of clean stove use	• Time	Quantitative	HH

Summary and Next Steps

Several themes around defining and achieving adoption arose from the presentations, discussions and, breakout sessions throughout the workshop.

An overarching theme was that adoption is a function of social, economic, and policy factors. Developing frameworks which take these factors into account will enable a better characterization of 'adoption', as well as its key drivers and determinants. In addition, ensuring sustained user acceptance is key to ensuring a thriving market for clean cookstoves and fuels. Strategies to promote behavior change at the community and individual level will thus be critical to ensuring success.

Defining Adoption

A recurring topic was the definition of adoption. This definition should be based on what is feasible and impactful. In a few studies, although CCS did not completely displace traditional stoves, CCS had assumed the role of primary stoves which indicates a positive development towards adoption. Some participants proposed that we should aim to "shrink the behavior" of adoption into small doable actions that are feasible for the target audience yet still yield benefits. Participants also highlighted the value of successfully reducing household exposure to air pollutants versus striving to meet the WHO AQGs. The question that remains is whether a definition of adoption based on CCS usage levels and performance would be sufficient to enable the estimation of health, environmental, and gender impacts.

A few terms were often used interchangeably throughout the workshop. "Adoption" and "sustained adoption" were used interchangeably. "Adoption" was sometimes used to refer "initial use" or "uptake" (and vice versa) and sometimes to refer "sustained adoption". "Use" and "intensity of use" were applied differently to describe the phases of moving from "initial use" to "sustained adoption". A related theme that was repeated by panelists and participants alike was "Adoption is a process". This reinforces the value in creating definitional frameworks according to the value chain from distribution to sustained adoption.

The importance of incorporating WTP in a defining adoption somewhat divided the workshop. Some panelists and participants felt including some measure of WTP is critical to define adoption. Some studies cited CCS price and high repair costs as key barriers to adoption while others cited behavior change. A useful question was raised: "Do people pay for something and sustain it because they see returns, or do they sustain it because they paid for it?"

Several recent studies that were discussed led to a common deduction that complete displacement of traditional stoves is crucial. It was evident from study results that health and environmental impacts will not be realized at significant levels - even with a high performing stove - if traditional stoves are used even minimally. This theme leads back to the discussion of defining adoption based on whether a program aims to generate feasible but significant impacts or the ideal ultimate impacts. Questions arose on whether adoption is achieved when the CCS is the primary stove, when the CCS is the secondary stove but used regularly, or only when the traditional stove is completely displaced. Should the degree to which a traditional stove must be displaced to achieve adoption vary based on the type of CCS in use and level of impact that is desired?

Achieving Adoption

The workshop opened up with universal acknowledgement that distribution does not equate adoption. However, many aspects of distribution influence adoption. Adoption is a process that begins with user acceptance. Increased access to clean cooking technology is not enough to achieve adoption. Targeted interventions are needed.

While a great deal of discussion focused on various policy, economic, and behavior change interventions to promote adoption, it was emphasized that the market will not thrive without user acceptance. Investments in behavior change interventions and in creating an enabling environment for CCS market will be effective only by ensuring user acceptance of the product. This theme implied investment in boosting market value for CCS.

Stove-stacking and its implications for defining adoption, as well as the extent to which adoption is achieved, was a major theme in most of the panels. Stove-stacking is a persistent reality and must be incorporated in clean cooking program design and implementation approaches. Participants proposed that clean cooking programs should offer a "portfolio" of options for fuels and stove types needed to meet the complex and various cooking tasks and practices performed in order to fully displace traditional stoves.

Using the meeting materials as a starting point for discussion, the Alliance will hold a public consultation period to gather further stakeholder feedback this summer, and plans to finalize the definition and framework at the 2015 Clean Cooking Forum in Accra, Ghana in November, 2015.

Appendix:

List of Acronyms

Alliance	Global Alliance for Clean Cookstoves
AQG	Air Quality Guidelines
BCC	Behavor Change Communication
BEM	Behavior Economic Model
CBO	Community Based Organizations
CCS	Clean Cookstove
FISE	Fundo de Inclusion Social Energetico
FOAM	Focus, Opportunity, Ability, Motivation
IAQG	Indoor Air Quality Guidelines
ICS	Improved Cookstove
ISO	International Organization for Standardization
LPG	Liquefied Petroleum Gas
NGO	Non-Governmental Organizations
NIH	National Institutes of Health
PAHO	Pan American Health Organization
SEM	Socio-Ecological Model
Swiss TPH	Swiss Tropical and Public Health Institute
TERI	The Energy and Resources Institute
TRAction	USAID Translating Research into Action
UPCH	Universidad Peruana Cayetano Heredia
USAID	United States Agency for International Development
WHO	World Health Organization
WTP	Willingness To Pay

Workshop Agenda (Spanish)

Día 1 – Lunes, 04 de mayo de 2015 - Sala Las Plazas

9:00 – 9:30 ***Café*** *(Terraza, segundo piso)*

9:30 – 10:15 **Bienvenida e Inauguración del Taller**
Stella Hartinger Maestra de Ceremonias
Universidad Peruana Cayetano Heredia

Patricia García
Decana de la Facultad de Salud Pública y Administración
Universidad Peruana Cayetano Heredia

Brian Smith
Director de Operaciones
Global Alliance for Clean Cookstoves (Allianza)

Helen Petach
Consejero Científico
Agencia de Estados Unidos para el Desarrollo Internacional (USAID)

10:15 – 10:30 **Información General y Objetivos** *Sumi Mehta, Global Alliance for Clean Cookstoves*

10:30 – 12:00 **Panel: La Aceptabilidad y Adopción de Cocinas Mejoradas en los Andes: El Estudio de Adopción en el Perú**

El Swiss Tropical and Public Health Institute y la Universidad Peruana Cayetano Heredia presentarán los resultados de su estudio de adopción, que buscó identificar los principales factores que influyen en la aceptabilidad y la adopción de cocinas limpias y seguras, utilizando un marco socio-ecológico, en las poblaciones andinas y rurales del Perú.

Donee Alexander, Alianza, Moderador
Daniel Mäusezahl, Swiss Tropical and Public Health Institute (Swiss TPH)
Stella Hartinger, Universidad Peruana Cayetano Heredia (UPCH)
Amy Powell, UPCH-Swiss TPH Health Research Platform

12:00 – 13:00 ***Almuerzo*** *(Terraza, tercer piso)*

13:00 – 14:30 **Panel: Comunicación para el cambio de comportamiento para Cocinas Limpias**
USAID a través del proyecto Translating Research into Action (TRAction) será el moderador del panel sobre el rol del cambio de comportamiento en el sector de las cocinas limpias. El panel, incluirá a los editores y autores que participan en la edición especial, se discutirá cómo se define el cambio de comportamiento en el campo, las principales lecciones aprendidas que se podrían aplicar a otros sectores, y se sugerirá como integrar el cambio de comportamiento en los esfuerzos para promover energías limpias para cocinar. Los panelistas presentarán los resultados del reciente suplemento del Journal of Health Communication en Estrategias para el cambio de comportamiento para incrementar la adopción de cocinas y combustibles limpios, y destacarán los vacíos de información y preguntas existentes.

Jay Graham, George Washington University, Moderador
Julia Rosenbaum, FHI360, USAID WASHPlus

Sumi Mehta, Alianza
Subhrendu Pattanayak, Duke University
Michael Johnson, Berkeley Air Monitoring Group
Debbi Stanistreet, University of Liverpool

14:30 – 14:45 **Actualizaciones:**
Anuncio del Nuevo Estudio de Investigación de Adopción Financiado po USAID/Alliance
Sumi Mehta, Alianza
Helen Petach, USAID

Reporte del nuevo NIH Implementation Science Network *Josh Rosenthal, NIH*

14:45 – 15:15 **Sesión: OPS Guías para la Calidad del Aire de Interiores (IAQG siglas en inglés)** *Karin Troncoso, PAHO*

En esta sesión se presentarán las nuevas Guías para la Calidad del Aire de Interiores para los hogares. Las guías están diseñadas para proporcionar, a los países y los socios implementadores, con información práctica sobre el funcionamiento y las características de las tecnologías de combustión limpias y los combustibles necesarios para prevenir los efectos negativos en la salud, actualmente atribuibles a esta fuente de contaminación del aire.

15:15 – 15:30 ***Café*** *(Terraza, segundo piso)*

15:30 – 17:00 **Panel: Resumen de Estudios de Género y Adopción**
La Alianza encargó una investigación para llenar los principales vacíos de información existente, sobre el impacto de las tecnologías limpias para cocinar en las mujeres usuarias y sus familias. De la misma manera se buscó determinar cuál fue el impacto de las mujeres empresarias que trabajan con cocinas y combustibles limpios y su impacto en las tasas de adopción. Los panelistas discutirán los resultados de la investigación llevada a cabo en Kenia, el sur de Asia y la región andina mostrando efectos sobre la adopción, las ventas, generación de ingresos, la educación, el empleo del tiempo, y trabajo.

Brian Smith, Alianza (Moderador)
Anita Shankar, Johns Hopkins University
Paola Mendez, Independent Researcher
Shanti Kleiman, Mercy Corps
Rafael Escobar, Practical Action

17:00 – 17:30 **Discusión y palabras de Clausura** *Richard Grinnell, Alianza*

17:30 – 19:00 ***Recepción*** *(Terraza, tercer piso)*

Día 2: Martes, 05 de mayo de 2015 – Sala Las Plazas

9:00 – 14:00 **Sesión de Trabajo: Indicadores de Adopción**
Esta sesión se enfocará en definir el término *adopción* y desarrollar un marco práctico para los implementadores que necesitan medir y evaluar los beneficios potenciales que se pueden lograr a través de la adopción de energías limpias para cocinar. En la actualidad, los programas suelen utilizar *distribución* y *ventas* como indicadores aproximados de la adopción. Hasta este momento no se ha desarrollado un marco general para definir o medir la adopción a través de indicadores concretos.

El objetivo de esta sesión es llegar a un consenso sobre que es la ´adopción´ y determinar cuáles son los indicadores clave que lo definen. Si bien el diseño y la producción del producto es

fundamental para garantizar la adopción sostenida, dada la experiencia de los participantes en el taller, esta sesión se enfocará principalmente en determinar los indicadores que están ligados a la política, población y comunidad, la distribución y aceptación, intensidad de uso, y la adopción sostenida.

Las sesiones de trabajo ofrecerán una oportunidad para que los participantes determinen los indicadores por cada área temática. También se discutirán las fortalezas y limitaciones de las técnicas y herramientas disponibles para medir la adopción y el uso de la cocina.

9:00 – 9:20 **Introducción, Descripción y Objetivos** *Sumi Mehta, Alianza*

9:20 – 9:45 **Marco Muestral de WASH y Cookstoves**
Jay Graham, GWU

9:45 – 11:00 **Sesiones Paralelas: Desarrollar los indicadores**

- Mesa 1 Política: *Grinnell, Moreno*
- Mesa 2 Promoción, incluyendo la Población y la Comunidad: *Mehta, Rosenbaum, Bashin, Pillarisetti, Cabezudo, Castro*
- Mesa 3 Distribución y Absorción: *Petach, Tully, Powell*
- Mesa 4 Intensidad de uso: *Alexander, Troncoso, Ruiz, Stanistreet, Hartinger, Johnson*
- Mesa 5 Adopción Sostenida: *Rosenthal, Graham, Kumar, Mäusezahl*

11:00 – 11:30 ***Café*** *(Terraza, segundo piso)*

11:30 – 13:00 **Técnicas y Herramientas para medir el uso y adopción de cocinas.**
Esta sesión se centrará en las diferentes herramientas disponibles para medir el uso diario de las estufas, se incluirá en la discusión el uso de los Monitores (SUMs siglas en inglés) y otras tecnologías disponibles utilizadas durante el trabajo de campo.

Donee Alexander, Global Alliance for Clean Cookstoves, Moderador
Ilse Ruiz-Mercado, Universidad Autonoma de Mexico
Ajay Pillarisetti, University of California-Berkeley
Tara Ramanathan, Nexleaf Analytics
Michael Johnson, Berkeley Air Monitoring Group

13:00 – 14:00 ***Almuerzo*** *(Terraza, tercer piso)*

14:00 – 15:00 **Informe de los Sesiones de Trabajo y Discusión**

Día 2 Cont´: Martes, 05 de mayo de 2015 – Sala Las Plazas

15:00 – 15:15 ***Café*** *(Terraza, segundo piso)*

15:15 – 16:30 **Determinantes prácticos para medir el Impacto con un Enfoque en Implementadores**
Esta sesión se enfocará en determinar la mejor de manera de medir los posibles beneficios que se esperan con la adopción sostenida de energía limpia para cocinar. Más allá de la adopción, la discusión tomará en cuenta la eficiencia y rendimiento de las tecnologías que se están llevados a escala, así como aspectos prácticos entre la medición y modelamiento de resultados, todo con un enfoque en la salud y el ambiente / clima.

16:30 – 17:00 **Resumen y Próximos Pasos** *Sumi Mehta, Alianza*

17:00 **Clausura**

List of Participants

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The Global Alliance for Clean Cookstoves is a public-private partnership hosted by the United Nations Foundation that seeks to save lives, improve livelihoods, empower women, and protect the environment by creating a thriving global market for clean and efficient household cooking solutions. The Alliance's 100 by '20 goal calls for 100 million households to adopt cleaner and more efficient cookstoves and fuels by 2020. The Alliance is working with its public, private and non-profit partners to accelerate the production, deployment, and use of clean cookstoves and fuels in developing countries.

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