



Clean Cooking Conference

convened in partnership by

The World Health Organisation

The Global Alliance for Clean Cookstoves

UK Department for International Development

Thursday 1 May 2014

SUMMARY of Participant Feedback

***The Royal Society
6-9 Carlton House Terrace
London SW1Y 5AG***

The World Health Organisation (WHO) is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries, and monitoring and assessing health trends. In the 21st century, health is a shared responsibility, involving equitable access to essential care and collective defence against transnational threats. <http://www.who.int>

The Global Alliance for Clean Cookstoves is a public-private partnership to save lives, improve livelihoods, empower women and protect the environment by creating a thriving global market for clean and efficient household cooking solutions. Today a staggering 4.3 million people around the world die annually from exposure to smoke from cookstoves. Women and children are disproportionately impacted. The Alliance's '100 by 20' goal calls for 100 million homes to adopt clean and efficient stoves and fuels by 2020. The Alliance works with 950+ public, private, and non-profit partners to help overcome the market barriers that currently impede the production, deployment, and use of clean cookstoves and fuels in the developing world. www.cleancookstoves.org

The Department for International Development (DFID) leads the UK government's work to end extreme poverty. A ministerial Department, its overall aim is to reduce poverty in poorer countries, in particular through achieving the Millennium Development Goals (MDGs). DFID works directly in 28 priority countries across Africa, Asia and the Middle East, and has regional programmes in Africa, Asia, the Middle East and North Africa, and the Caribbean, as well as development relationships with 3 Overseas Territories – St Helena, the Pitcairn Islands and Montserrat. www.dfid.gov.uk

PLEASE NOTE THAT THE CONCLUSIONS PROVIDED BELOW ARE EXTRACTED FROM THE FEEDBACK FORMS PROVIDED BY CONFERENCE PARTICIPANTS AND DO NOT NECESSARILY REFLECT THE VIEWS OF THE CONFERENCE HOSTS.

Session 1: What is the scale of the health issue?

Key presentations: Carlos Dora (WHO), Kirk R Smith (UC Berkeley)

Chair: Delna Ghandi (DFID)

This session focused on the impacts on human health of cooking on solid fuels.

WHO presented:

- the newly agreed WHO/Global Burden of Disease (GBD) findings (2012) for the number of deaths and disability-adjusted life years (DALYs) associated with household air pollution (HAP)
- reviewed previous figures and evidence, and
- explained the new figures - to provide a clear picture of the scale of this problem and clarified which figures should be quoted when communicating this issue in future.

Additionally, the 300,000 deaths per year associated with burns from cooking, and cooking fuels was discussed. These statistics as a whole were put into context with other health risks for given populations, with a focus on women and children.

Key Messages: Cooking with solid fuels such as biomass, animal dung, and coal is under recognised as one of the main killers and disablers of poor people in the world today.

Main conclusions drawn from the session from feedback forms:

- The energy and development community needs to engage the health community and strengthen health sector leadership on the issue of household air pollution
- The need for a whole community approach to tackling lack of access to clean cooking, given that ambient air pollution linked with biomass cooking can be above safe levels even if a given house is cooking on electricity.
- LPG, ethanol and electric induction hobs/stoves are key parts of the solution since they reduce smoke to safe levels, but shifts are needed in affordability and access.
- Need for two-pronged solutions. Really good woodstoves will still be needed by the isolated rural poor, as well as more gas and electricity for better off/urban poor.

Areas for further research from feedback forms:

- More field data on the health impacts, and health benefits, of interventions
- Broad work on the potential, and potential barriers, of a move from biomass to LPG and other clean fuels
- The potential for technology leap frogging to new lower power electric technologies
- The extent to which induction stoves and LPG are compatible with current designs of mini-grids/battery charging

Session 2: How low does Household Air Pollution (HAP) need to be to avoid negative health impacts)?

Key presentation: Nigel Bruce (WHO)

First respondent: Sumi Mehta (Alliance)

Chair: Maria Neira (WHO)

WHO presented the key findings of their analysis on household air-pollution (HAP) data and forthcoming, proposed indoor air quality (IAQ) guidelines. The guidelines provide evidence on exposure response characteristics, allowing comparisons to be made between different household fuels and technologies, regarding their expected health impacts.

The session included an introduction to the guidelines and provided background on the health impacts and the scientific evidence reviewed to inform the recommendations including:

- a. The application of the integrated exposure response function to estimate risk for household air pollution
- b. Use of a stove-emissions model to estimate the health impacts of various technologies.
- c. Recommendations made in the guidelines, regarding health impacts expected from the use of household energy technologies and fuels, like solid fuels (e.g. coal and biomass), liquid and gaseous fuels (e.g. kerosene, ethanol and liquid petroleum gas).

Key Messages: No smoke is good, however health benefits can be achieved at levels now set out in the IAQ guidelines providing a framework for progress, and these can be mapped onto different cooking/fuel solutions with reasonable confidence.

Main conclusions drawn from the session from feedback forms:

- There is a overwhelming need to promote household air pollution as a key health issue
- There is a need to field test as well as lab test, as the results can be very different
- For the full benefits to be achieved an entire community needs to adopt the clean cookstoves (given ambient air pollution)
- Biomass cookstoves (even the best ones) are often not clean enough to reduce air pollution to the levels required to eliminate risk

Areas for further research from feedback forms:

- A stronger evidence base to enable WHO to issue more specific guidance
- Field testing of improved cookstove technologies and fuels
- How to move to zero emission stoves
- Case studies for 'good' policy that provide examples of best practice that can be replicated
- The health impacts of using non-solid fuels eg. LPG

Session 3: What are the impacts on the health, safety and economic opportunities of women?

Key presentation: Zahra Nesbitt-Ahmed (IDS)

Chair: Joy Clancy (ENERGIA)

This session reviewed the latest evidence of the impacts of cooking with solid fuels on the lives of women and girls. It focused on time-saving, firewood collection and personal safety, and opportunity costs.

Main conclusions drawn from the session from feedback forms:

- A significant amount of time is spent not only collecting firewood but collecting water too – these are linked requirements for households, interventions should consider these interventions in tandem
- Cooking and collecting fuel and other 'time poverty' activities have major gender aspects and impacts
- There is a real need to raise energy up the gender agenda given its impact on the opportunities for poor women

Areas for further research from feedback forms:

- Better data on unpaid care work, where there is currently scant evidence
- Non-smoke related health issues, such as data on the skeletal/physical impacts of carrying wood, and violence that occurs whilst collecting wood
- Evaluations of cookstove and fuel interventions should include issues like safety, time spent, and economic impacts.
- The cultural variables which lead to the outcome that women are responsible for household energy issues in different countries.

Session 4: What are the impacts on climate and the environment?

Key presentation: Shonali Pachauri (IIASA)

Chair: Leslie Cordes (Alliance)

This session reviewed the latest evidence of the impacts of cooking with solid fuels on the climate and the environment.

Key Messages: The use of firewood and charcoal for cooking has significant local environmental impacts on forests, and is of global relevance to climate change, through deforestation, emissions of CO₂ and black carbon. This justifies inclusion of clean cooking within climate finance spending (e.g. GCF etc.)

Main conclusions drawn from the session from feedback forms:

- Household cooking is a major source of black carbon but additional research is needed to understand its full impacts
- Cooking on biomass has climate impacts, and a shift to clean energy access for all (even with LPG cooking) would have a negligible impact on greenhouse gases
- Climate change and deforestation have been important entry points to engage donor country audiences in biomass cooking's impacts.

Areas for further research from feedback forms:

- Research on short and long lived gases that are emitted by cooking
- One study on black carbon was cited by many authors, further research to back up this information is vital
- Why has the rate of electrification in the developing world moved faster than clean cooking?
- Whether LPG cooking solutions can reduce GHGs and be eligible for climate finance?
- How much does deforestation due to biomass cooking fuel contributes to climate change?

HIGH-LEVEL SEGMENT

Chaired by Kate Hughes, Low Carbon Team Leader, DFID

Key note speeches by:

- Dr Maria Neira, Director Environment and Public Health, World Health Organisation (WHO)
- Lynne Featherstone MP, Parliamentary Under-Secretary of State, UK Department for International Development (DFID)

Full speech transcript at <https://www.gov.uk/government/speeches/lynne-featherstone-improving-access-to-clean-energy-for-girls-and-women>

- Radha Muthiah, Executive Director, Global Alliance for Clean Cookstoves (Alliance)

Session 5: Clean cooking practices - what fuels and technologies can reliably achieve results? What is the status of standards?

Key presentation: Ranyee Chiang (Alliance)

Chair: Kirk R Smith (UC Berkley)

This session mapped the latest cooking technologies, fuels and practices in terms of the evidence on their ability to address the impacts described in earlier sessions. In particular, the session discussed how technologies map on to proposed IAQ guidelines, highlighting the stoves and fuels which can *reliably* meet the recommended safe levels of emissions.

The process of the ISO standards development, the use of tiers to rank cooking technologies, and the use of country testing centres measuring local technology performance was discussed.

Key Messages: The clean cooking sector is professionalising, has products that work, and the ISO standards can provide a reliable framework to ensure impacts are achieved at different performance levels.

Main conclusions drawn from the session from feedback forms:

- There is an urgent need for more field testing of the fuels and technologies on offer
- The clean cooking 'catalogue' of stoves and fuels is useful to enable comparison between stoves and improve the transparency on relative performance etc
- It is important for standards to have a few, but clear, criteria and standards

Areas for further research from feedback forms:

- The lifecycle and long-term durability of cleaner stoves and fuels needs to be explored
- Baseline studies, particularly on 3-stone fires are needed
- Better availability of devices to collect data cost-effectively
- Qualitative studies on what works best and least
- What is the strength of voluntary standards versus statutory limits?
- Is ethanol a viable fuel option to reach rural communities that do not have access to other fuels?

Session 6: Intervention effectiveness - what approaches have been effective in ensuring clean cooking practices are sustainably adopted?

Key presentation: Nicholas Goodwin (Tulodo), Jonathan Rouse (HED Consulting), Sarah Ellen O'Farrell (Tulodo)

Chair: Steven Hunt (DFID)

Presentation of the newly DFID-commissioned study on the effectiveness of clean cooking interventions in creating sustained behaviour change in terms of uptake of improved stoves, fuels and practices. The report focuses on – via the use of behaviour change techniques - new business models, new products etc. and includes case studies with a scorecard of effectiveness. The team will also present recommendations for incorporating behaviour change into new and existing interventions.

Key Messages: There are both tried and tested intervention approaches, as well as innovative ways to encourage uptake. Behaviour change may be a key framework and set of tools for stimulating the global shifts necessary.

Main conclusions drawn from the session from feedback forms:

- More consideration needs to be paid to consumer behaviour, as many of the determinants to cookstove uptake are not considered at present
- Tapping in to people's goals and aspirations more is needed in order to promote cookstoves successfully
- Behaviour change approaches have to be realistic about the possible transitions along the energy ladder for consumers in different market segments (e.g. rural vs urban, collecting firewood versus buying charcoal etc)

Areas for further research from feedback forms:

- Complementary research to behaviour change that occurs in the health sector eg. WASH, STDs
- How to frame clean cooking as a public health strategy?
- Long term assessments of stove/fuel use over time
- What affects not only adoption of clean cooking, but also rejection?

Session 7: The state of the art – practitioner panel on ground realities, market and consumer dynamics, financing and carbon markets

Chaired panel discussion: Chris Loxley (Unilever), Simon Collings (GVEP), Monika Rammelt (GIZ), Ron Bills (Envirovit)

Chair: Radha Muthiah (Alliance)

This session reflected on the evidence presented during the conference, from a field perspective. Why have some clean cooking practices not been sustainably adopted? What challenges have they encountered? How does stove stacking work? What are the latest financing mechanisms? Is policy needed? What consumer transitions are possible?

Main conclusions drawn from the session from feedback forms:

- There is significant potential for a well-known brand to take a clean cooking product and build on that brand recognition
- There are more opportunities for combined delivery of products and services for water and sanitation, HH energy, nutrition etc
- Customer segmentation important. If a product (international) is proven, local retail market research still has to be made to find the best channels and customer target groups

Areas for further research from feedback forms:

- Could tax exemption be a form of social or environmental results-based financing?
- Deeper exploration of multi-sectoral approaches to reaching markets
- What is the value of delivering interventions through community vendors?
- Do carbon-financed stove give-aways destroy consumer markets, or help seed them?

Session 8: Closing panel session and Q&A - how do we build markets for cleaner cooking solutions, and empower the health sector

Chaired panel discussion: Maria Neira (WHO), Radha Muthiah (Alliance), Pradeep Pursnani (Shell Foundation), Simon Trace (Practical Action), Sarah Butler-Sloss (Ashden)

Chair: DFID

This session provided a forum for senior leaders in the sector to put forward their visions on what needs to happen next in response to the evidence presented during the day - and for Q&A from meeting attendees.

Key Messages: This is a sector which is going somewhere, look out for key events and announcements later in the year at related SE4ALL, health and gender events.

Main conclusions drawn from the session from feedback forms:

- Although the clean cooking sector has come a long way, challenges remain in achieving the sales volumes needed to address the issue
- Clean cooking solutions need to be affordable, aspirational and accessible
- Need more recognition of difference between those paying and not paying (ie. mainly rural) for fuel
- There is a need to address this issue through a systems approach; an emphasis on collaboration across disciplines and co-benefits, and financing
- Electricity, LPG and other alternative fuels have potential to hit health targets, but these cleaner fuels also present challenges

Areas for further research from feedback forms:

- Rigorous evaluations of technologies, assessment of outcomes, market mechanisms, behaviours/adoption, and durability all need to be increased
- When can a market be developed - and when is that not realistic? What is the financing narrative on expanding access if solutions which are clean enough are simply out of reach for poor consumers – market based, but still with public support? If so through what means?