Clean Cooking Mission: A way to transition to completely smoke-free kitchens
Roundtable discussion organized by Prayas and the Collaborative Clean Air Policy Centre (CCAPC)

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India Habitat Centre, New Delhi



I. Background

Household air pollution (HAP) caused by burning solid fuels for cooking is a major source of mortality and morbidity in India. According to a recent study conducted by ICMR, PHFI and IHME[1], HAP could cause Lower Respiratory Infection (among children), Chronic Obstructive Pulmonary Disease, Ischemic Heart Disease, and Haemorrhagic and Ischemic Stroke, which are four of the five leading contributors to Disability Adjusted Life Years (DALYs) in the country. Recent evidence suggests that smoke from residential solid fuel use is also a major contributor to outdoor particulate pollution[2]. Therefore, this is clearly a major developmental challenge for the country to address, and a rapid transition to clean fuels for cooking can potentially save many lives.

The government has also recognized the importance and urgency of this challenge, and initiated programs such as the Pradhan Mantri Ujjwala Yojana (PMUY) and the proposed National Clean Air Programme (NCAP). PMUY, spearheaded by the Ministry of Petroleum and Natural Gas (MoPNG), aims to provide subsidised LPG connections to 8 crore households by 2020. The Ministry of Environment, Forests and Climate Change has published a draft version of the NCAP[3] as a first step to tackle the severe air pollution problem in the country. However, the scale of the Indian challenge is formidable. Estimates suggest that more than 15 crore households still use solid fuels as their primary fuel for cooking. Though many of them may possess an LPG or electricity connection, they may not be using them as their primary cooking fuel for reasons such as affordability and reliability of supply.

[1] India: Health of the Nation's States - the India state-level disease burden initiative, 2017
[2] Burden of Disease Attributable to Major Air Pollution Sources in India, 2018 by IIT Bombay, HEI and IHME
[3] http://envfor.nic.in/sites/default/files/NCAP%20with%20annex-ilovepdf-compressed.pdf

Effectively transitioning away from solid fuels for household cooking is also a complex issue as it involves multiple dimensions. It is, of course, a health and energy access problem. In addition, it has a gender dimension since women do most of the cooking in India, and it is women and girls who often go through the drudgery of fetching the solid fuels. There is also an environmental dimension as it is understood that the need for firewood has led to rapid deforestation and loss of tree cover in some parts of the country. Modern fuel use can also have impacts on the environment and the current account deficit for an energy resource poor country like India. The issue also has a poverty dimension as affordability of modern fuels is an important reason for not shifting to modern fuels. Another aspect that makes this challenge multi-dimensional is that there is more than one possible solution, i.e. modern fuel, that households may choose to use if they are available affordably and reliably. Today, these include electricity, piped natural gas and biogas in addition to LPG. In future, other technologies may also be considered as they mature. The diversity across India in resource endowments, network availability, infrastructure quality and paying capacity makes it necessary to find location-specific solutions and mechanisms best suited to that context. This implies that a single top-down solution may not be as effective as a broad framework of solutions that are adapted to local needs by states or sub-state administrative agencies. Multiple stakeholders would have to come together effectively to complement their areas of expertise and act in a coordinated fashion to overcome this challenge at the earliest.

Prayas and the Collaborative Clean Air Policy Centre (CCAPC) have been studying various aspects of this challenge. Prayas has recently published a report titled "Fuelling the transition: Costs and benefits of modern cooking fuels as a health intervention in India" studying the health benefits and financial costs of different trajectories of transitioning to modern fuels. CCAPC partners have been studying aspects related to air pollution, health impacts and behavioural change. Building on this research, Prayas and CCAPC had organized a roundtable discussion to discuss and deliberate upon an important aspect of this complex and multi-faceted challenge, namely the institutional architecture and design of how to accelerate the transition to modern cooking fuels, particularly a mission mode approach to the problem in the form of a clean cooking energy mission.

The first session of the roundtable consisted of background presentations by Prayas and CCAPC. These presentations are available here. This was followed by a roundtable discussion on the contours of a clean cooking mission to address some of the issues highlighted in the presentations. The roundtable was attended by representatives from the government, academia, think tanks and practitioners covering the energy, health, environment and gender aspects of the problem. A complete list of the participants is given in the Annexure. The agenda for the roundtable is given below.

II. Agenda

Time	Item
09:30 – 10:00	Registration
10:00 – 10:05	Welcome
10:05 – 10:45	Background presentation(s) • Household Air Pollution and its contribution to ambient pollution and health impacts, Sarath Guttikunda, Urban Emissions / CCAPC • Recent evidence of health impacts of solid fuel use in households and behavioural aspects of the transition, Kirk Smith, UC Berkeley / CCAPC • The imperative of an accelerated transition to modern fuels: results from a cost-benefit analysis study, Ann Josey, Prayas
10:45 – 12:50	Round-table discussion centred on the institutional architecture for a clean cooking mission
12:50 – 13:00	Summing up and way forward

III. Issues discussed

The background presentations described the contribution of household air pollution to outdoor air pollution, the avoidable risk of health impacts due to solid fuel use for cooking and the cost-effectiveness of modern fuels as a health intervention. Thus, a case was made for accelerated transition to modern fuels and the importance of a multi-dimensional, multi-stakeholder and multi-fuel/technology clean cooking mission in achieving it. Participants were asked to share their views on issues such as the structure and design of the proposed mission, approaches to it, sources of finance, role of different agencies and ministries, monitoring and evaluating the mission, data needed for evaluation, ways to make health and gender aspects the central focus of the mission and other relevant issues. A brief summary of the discussion is provided below.

1. Structure of the Clean Cooking Mission

It was discussed that a mission mode approach for clean cooking fuels by the government would be useful as it would be effective in bringing in a sense of urgency required for the transition and the resources needed for its implementation. The focus on outdoor air pollution is a good opportunity to bring resources to household air pollution also. A 3-tier system with a multi-ministerial committee for oversight at national level and committees for implementation at the state and district level was suggested for such a clean cooking energy mission. The mission would have to be hosted in an omnibus body, for e.g. the Niti Aayog or with the Prime Minister's Office (like Swachh Bharat) to ensure co-ordination between multiple ministries and stakeholders. Digital India can be leveraged to implement the mission on a big scale. It would help to frame the mission with a long-term vision in mind. One way to do this would be to combine the mission with a clear legal mandate for access to clean cooking energy. This would ensure that the mission and efforts are taken forward by successive governments. The National Clean Air Programme can provide an opportunity in this - not only for efforts to accelerate

transition, but also provide a mandate for clean air. It was suggested that the mission's name also should be chosen carefully to reflect that it is the cooking fuel / technology that has to become clean-burning (and not the cooking itself).

2. Financing the Mission

Finances and resources are an important point of consideration to take any mission forward and to ensure its provisions translate to results. A national clean energy fund, or state specific funding mechanisms can be thought of as sources of financing the mission. For this, engagement with the finance ministry is needed. Reforms at GST level can also be thought of- like levying a luxury tax instead of just sumptuary taxes. Well-directed and designed subsidy programs would be an important policy lever to improve sustained uptake of clean cooking fuel-technologies. Subsidy should be fuel agnostic and promote stacking of clean fuels. When it comes to LPG, subsidy freed up by the 'give it up' campaign by MoPNG can be allocated to the poor. Ideas for subsidy design include telescopic prices and cross subsidy. DBT can be used for delivery of such a differentiated and targeted subsidy.

3. Approaches to the Mission

The policy framework of the mission should be based on perspective of universal access to basic needs. Clean cooking energy can be thought of as a public good requiring community focused initiatives. Livelihood aspects of the transition will be important. For this, benefits of local production should also be passed onto the people in the area. Policies can be designed not just for cooking energy but also clean household energy that can incorporate other uses. In addition to the use of fuels for cooking, other uses like space heating should also be considered. Similarly, policies should also think about the role of ventilation in houses. Other technologies such as solar based cooking and self-contained electric cookstoves using solar panels can be explored. Lastly, energy import dependence should also be a factor in decision making and planning the transition to modern fuels, though it may not be a major concern.

Fuels need a disaggregated push based on local realities. For example, biogas may not work well in north India even with significant bovine population due to ambient temperature drop in winters, and it may be more feasible in south India even though it has lower bovine population. Therefore, states should also be made partners in the mission in order incorporate state specific realities and opportunities.

4. **Health, Gender Aspects and Behaviour Change Communication**:

There is a need to generate demand among households for clean energy. For this, a service approach to policy needs to be prioritized rather than type of fuel. Taking into account how different fuel-technologies meet people's cooking preferences and cultural needs will be important in ensuring adoption of clean cooking energy. There is a need for grievance redressal mechanisms for consumers of fuel. This facilitates trust development of fuel and service providers with the communities.

The healthcare sector would play an important role in the health aspect of the challenge. Currently, public awareness about the health benefits of the transition is low. Campaigns for clean fuels should also focus on this. Owing to the delay in appearance of health impacts, immediate tangible health

symptoms of solid fuel use like nausea, headache can be useful entry points for awareness. Potential saving on healthcare costs due to transition needs to be understood and highlighted to communities. Lessons can be drawn from past health programmes for improving health and behaviour change communication. The revised national TB program can give useful insights for this.

Since cooking is traditionally a woman's job, and adoption of clean cooking fuels can be neglected by the family, the policies need to have women's health and time as their focus. Useful inputs can also be gained from programs on women's empowerment.

5. Data availability and collection

Currently a lot of data-especially data related to PMUY, air pollution and health impacts is available or generated at the national level. More granular and disaggregated data in the public domain is needed. Availability and use of data at the local level can encourage communities to ascribe value to the benefits of the transition. Micro-mapping of air pollution with socio-economic indicators is needed, so that distribution systems of fuels are revamped. Some data which remains restricted to publications needs to be made available for public use. Monitoring and evaluation of cooking energy programmes requires assessment of emission concentrations, exposure to emissions, and health impacts apart from data on energy use. Lack of adequate data from past programmes and efforts for clean energy access made their evaluation difficult, which should be corrected with future missions and programmes.

6. Other issues

The mission framework should also take into account community and commercial cooking. Restrictions on use of certain traditional fuel-technologies like charcoal based tandoors in big enterprises can lead to outsourcing of such cooking practices to small enterprises or poor households, who have to bear double the burden of emissions. Alternative technologies which are suited to such cooking practices need to be thought of.

Livelihood aspects to empower women should be considered and technologies and processes to best use the available agricultural residue should be explored.

IV. Way Forward

There was consensus among participants on the usefulness of the roundtable discussion and dialogue and exchange of ideas among diverse stakeholders. There was agreement on the need for co-ordination between different efforts to plan a roadmap or mission for the transition and involvement of more organizations in the consultative discussions. As this roundtable was a first step of such interactions, it was noted that having more such meetings in the future can take discussions forward.

Annexure

Table 1: List of participants

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