

## Logjam - Cooking Gas

### **Clean cooking environment, improved chulhas and other matters...**

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In today's context, of the commonly used modes of cooking in India, LPG is by far the most effective and least polluting. Electricity, though proven to be better, has limited presence in Indian households. The switch from wood to kerosene to LPG is seen as progress and a symbol of upward social mobility. There have been efforts to promote alternatives, primarily in rural areas, including biogas, smokeless chulhas, solar cookers, etc. These have succeeded in varying degrees depending on the effectiveness of consumer identification and investment in consumer education. A critical factor for replication has been availability of incentives for end-users and government backing in promotion and training.

Even fifty years from now, there will probably not be much change in rural areas in the cooking environment, unless there is a vigorous initiative by the government. Wood and kerosene will continue to be the dominant cooking fuels. We don't see rural women using LPG, first because it is very costly and second, because there are no distributors willing to reach out to remote areas. There is a subsidy available on kerosene, which ends up being used as an adulterant in diesel and petrol, directly affecting pollution levels, especially in cities. If this subsidy were transferred to LPG there might be a better chance for a majority of Indian women to access cleaner fuel and a more conducive cooking environment. Cylinders of five litre capacity could be used and the initial investment offset by a subsidy. This could be a boon also to women in slums, providing a safer and cleaner alternative for cooking, not to speak of the improved air quality in towns and cities.

There are reasons why rural women may not readily accept alternative chulhas, and these need to be understood. Collection and preparation of fuelwood and farm waste does not involve monetary outflow, there is only a notional value imputed to it. There are improved models of fixed wood chulhas, but often these are not able to combust agriculture waste. There needs to be a greater amount of research into adapting these chulhas and investment in promoting them. There is a subtler factor, which is not addressed. Smoke from burnt cowdung, wood and agriculture waste works to keep away termites, borers of timber and bamboo, etc, which is why minimum ventilation is preferred, to allow the smoke to circulate within the house. Further instances of use of kitchen smoke are seen in Kerala, where small producers hang rubber sheets in kitchens for curing and drying, while in the North East states, meat is hung in the kitchens to be smoked. Alternative methods of smoking need to be promoted, together with alternative cooking fuels and chulhas.

One of the technologies with great promise for the future, especially in rural areas with woodlots and weeds like lantana and ipomea, is the use of biomass gasifiers. These wood digesters are capable of producing good quality combustible gas as well as generating electricity. There are many prototypes in India today, but research into single fuel systems is still underway. And when there is a stable model, rural women in India can be among the first to take to direct cooking on electricity.

There needs to be greater investment in R&D, followed up by effective packaging, promotion and appropriate incentives, to draw women out of traditional practices and accept these new-age cooking fuels, and chulhas to go with it.