

Smokeless Chulha leads to increased efficiency, reduced cooking time

Stoves and open fires still remain the primary means of cooking and heating for nearly three billion people. Many of such users belong to the Korku Tribe, living in the Khandwa region of Madhya Pradesh State. Out of the 288 households in the village, about 185 are Korku families. Most of these families are dependent on small or marginal farming who supplement their livelihoods by engaging in daily wage work as well.

Majority of the Korku families shifted to cash crops some three-four decades back after gradually transitioning from their traditional crop, millet, which was once the mainstay of community's food security and nutrition. Over the years, due to erratic rainfalls, soybean, considered one of their major crops also failed. All this resulted in surmounting debts and deteriorating condition of the community. Korku Tribe of Madhya Pradesh is one of the very few tribes to still have some of its aboriginal and traditional customs intact. And for years, this community has been using traditional firewood Chulhas for cooking. While health problem is one of the major issues associated with traditional cooking, its effect on environment and drudgery usually borne by women is one of its critical consequences.

In 2018, Smokeless Cookstove Foundation, along with partner NGO, Spandan Sewa Samaj Samiti and pharma major, Glenmark Foundation launched a smokeless chulha to provide interim relief in the kitchens of the Korku Tribe. Smokeless Cookstove Foundation conducted three training sessions in the months of June, July and September 2018 covering three districts (including Khandwa) and over 30 villages in Madhya Pradesh.



The objective of Smokeless Cookstove Foundation (SCF) is to curb the problem of Household Air Pollution. With its training program - the Smokeless Cookstove Revolution, seeks to train the rural, migrant and tribal population on making a 'virtually zero-cost, efficient & improved cookstove' that has a considerably reduced smoke output based on the

principles of Rocket Stove Technology. SCF has adopted a 'Train the Trainer' method to create trainers from among the community.

The Stove uses far less fuel than traditional chulha and emits lesser fumes. The improved efficiency results in reduced cooking time. The raw materials used include locally available mud or clay, cut dry grass, rice puffs, cow dung and bricks. Special metal moulds with specific dimensions are used to make the base for the Chulah – also known as the doughnut. The metal mould can be manufactured for under INR 500 (~USD 7) and thereafter be used to make several hundred stoves.

While the Chulha does not compete with other models of the Improved Cook Stoves available in the market, the solution provides immediate adaptability as it looks similar to a traditional chulha. The survey conducted with households that had installed Smokeless Chulhas 2 to 6 weeks prior showed encouraging results. It was recorded that on average, their cooking time reduced by 33% or 1.30 hours a day, enabling users to focus on income generation activities. As for the productivity, the daily average consumption of firewood gets reduced by 47%, which translates to a family saving of about 96 Kgs of firewood in a month and about 1,170 Kgs in a year. This indicatively translates to about 2.9 trees saved per household, per year, as the average biomass of a 5 year old teak tree is about 400 Kgs (approximately.) This is a huge fiscal saving given the profile of the surveyed households and this makes Smokeless Cookstoves, a sustainable option for the community. Apart from this, 100% of the surveyed people indicated a considerable reduction in visible smoke compared to their traditional chulhas.

The Smokeless Cookstove team has been working tirelessly since late 2016 taking the work into remote regions that are in desperate need of this solution. They have already conducted successful pilot workshops across villages in Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh, Rajasthan and West Bengal.

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