Enabling Rural Poor Households to Switch from Traditional Cooking Stoves and Fuels to Clean Alternatives

**Background:** In Gujarat’s Dang district’s Subir block and Surat District’s Umarpada block, more than 80% of households (HHs) are using traditional chulha with firewood as fuel for cooking, and most of our poor and marginalized. Women and infants/young children are exposed to multiple health risks due to biomass burning in the kitchen with typically inefficient traditional stoves and inadequate ventilation. Apart from forest degradation, the purchase of biomass-based fuel also leads to a financial burden, specifically for poor households. Time spent on the collection of biomasses further leads to loss of productive time and added physical burden, especially on women.

With this background, CARE India Solutions for Sustainable Development (CISSD), with the support of Shell Energy India is implementing a project on Enabling Switching to Clean Energy Alternatives in tribal areas of South Gujarat two locations since April 2020. The goal of the project is to promote the transition of sustainable adoption of 6,000 Traditional Cookstove Dependent Households (TCDHs) to clean energy options through a combination of capacity building, collectivization, market development, and multi-stakeholder engagement actions.

During this year 2021-22 to achieve an Outcome of “Women from TCDHs have identified ICS options to suit their needs, by price and design”, an outcome of the project team approached and conducted activities like awareness generation at different hamlets, villages, and blocks, they have developed 11 IEC Module and Materials, 28 Wall Paintings on Household Air Pollution (HAP) and 8 Clean Energy Cooking Options, and 25 different awareness sessions, and 10 Fuel Management training. While conducting all the activities and sessions with participants, the project achieved 96% adoption by reaching a total of 3854 households out of the total targeted 6000 households for the adoption of different improved cookstoves. In comparison to the baseline study average, 5-6 kg/day of wood was used which in the Mid-term review study indicates a 38% reduction in fuelwood consumption which also reduces the drudgery per family. The baseline study estimates that the average CO2 or equivalent emissions from the burning of firewood is 5.04t per annum/HH in project villages. Due to the adoption of ICS and other clean cooking fuels, there has been a reduction in the use of wood consumption resulting in CO2 or equivalent emissions from the burning of firewood to 3.67t per annum/HH. A mid-term review study indicates a 27% reduction in emissions. Also, in the study that amplifies the benefits of using ICS with awareness of the ICS value chain; about 96% HHs surveyed showed a willingness to purchase ICS in future with their own money.

**Objective:** To promote the transition of sustainable adoption of 6000 traditional cookstove-dependent households to clean energy options, through a combination of capacity building, collectivization, market development, and multi-stakeholder engagement actions.

**Geography:**
15 villages Umarpada Taluka, Vadpada range from Surat District, Gujarat, 10 villages from Subir block, Dang district Gujarat.

**Target Population:**
The transition of sustainable adoption of 6,000 traditional cookstove dependent households (TCDH) to clean energy cooking options.
The overall progress of the project is as follows:

- Within 2 years, while conducting all the activities and sessions with participants, the project achieved 96% adoption by reaching a total of 3854 households out of the total targeted 6000 households for the adoption of different improved cookstoves. 27% reduction in CO₂ emissions.
- Total of 150 SHE-Schools in both project locations - Subir block and Umarpada block. All members of SHE School received training on general membership and working of SHE school. About 85% of respondents have received training in fuel management, 13% as SHE champions, and 7% as SHE technicians.
- The team has trained those SHE technicians for the SRALA cook stove-making process where they have made 65 SRALA cookstove models now to promote entrepreneurship to bring the sustainability of continuous use of ICS.
- Out of 6000 HH, a total of 2110 HH women and men participated took and acknowledged the need for cooking solutions. A mid-term review study also showed that over 90% of women are now aware of different types of ICS available and 82% are aware of different ICS vendors.
- By promoting clean energy cooking options Under the Pradhan Mantri Ujjwala Scheme, a total of 155 applications for LPG registration have been submitted through document support and 82 households received LPG kits through LPG intervention in both project locations of Umarpada and Subir. With increased awareness and project linkages, about 46% HHs have started using improved cookstoves (firewood based) and another 20% of HH use LPG-based cookstoves as a secondary stove.
While cooking on ICS get time for ourselves

**Name:** Hinaben Jivubhai Bhoye  
**Village:** Pipaldahad, **Block:** Subir  

Hinaben Jivubhai Bhoye is an enthusiastic and energetic SHE Champion from Pipaldahad village of Subir Block. She is unmarried and the sole breadwinner in her family of 10 people. To run and manage the family she learned tailoring.

For 13 months, she has started her journey as a SHE Champion. SHE has been active in all the project activities, and she felt that after attending project activities i.e SHE Champions training, Awareness Sessions, Fuel Management training, Cooking Camp, etc. She learned the benefits of improved cookstoves, became sensitized about women’s drudgery of traditional cooking, and emerged as a leader. Earlier, She was having a fear of public speaking but after attending various training and project activities, she can speak in front of a group of people and influence other SHE School members & village community for adopting the improved cookstove. SHE adopted the Agneeka Eco Mini-Improved cookstove and she affirms that it is having so many advantages and she can easily cook food for 10 people with ease.

Earlier, she was spending 5 hours on average cooking by using a traditional cookstove but after using the Agneeka Eco mini stove on an average she is spending 3 hours. There is a reduction of 2 hours in her daily cooking time. Now she can spend more time in tailoring by using saved hours through Improved Cook Stove.

Further, she adds that earlier 6 kg of fuelwood was used daily in traditional cooking, but the use of ICS has reduced the use of Fuelwood to 3 to 3.5 kg. Earlier her income was 3000 to 4000 rupees per month. As she can give more time to tailoring at present her income is 5000 to 6000 rupees per month. Further, she adds there is very less smoke emitted that made the household environment healthy and every family member is now understanding the advantages of an improved cookstove.

**Champion emphasis that this ICS has not been only providing health benefits but bringing prosperity to our family and community at large.**