



Alternative Sources of Household Energy in Kafa Biosphere Reserve

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What?

- Improve household energy management through introduction of alternative energy sources in the Kafa biosphere reserve
 - develop an applicable concept for alternative energy sources,
 - introduce new alternative-energy technologies to at least 2,500 pilot households – reduce wood consumption by **at least 30%**,
 - introduce further improved MIRT stove to local households,
 - measure the impacts of 2,500 pilot households.



Why?

- 91% of Ethiopia energy demand depends on Biomass, 89% of the total energy used by HHs
- Kafa BR satellite-based forest change analysis result showed:
 - b/n 2002 & 2010, 20,000 ha deforestation rate (6% of the total forest stand)
 - forest loss has released considerable amounts of carbon dioxide (CO₂) and affected the forest's sink function
 - if this trend continues, the forests of the Kafa BR will have completely disappeared within the next 100-200 years due to deforestation and lead to the release of 160 million t of CO₂
- Supports the implementation of Ethiopia's Climate-Resilient Green Economy Strategy

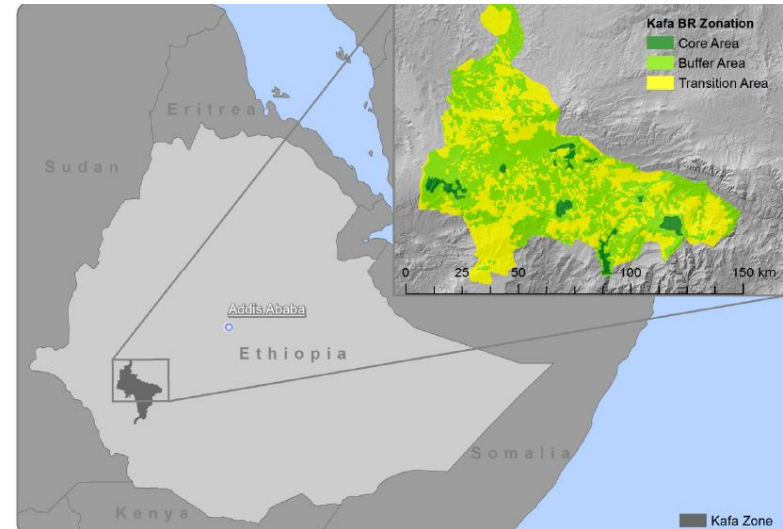


Where?

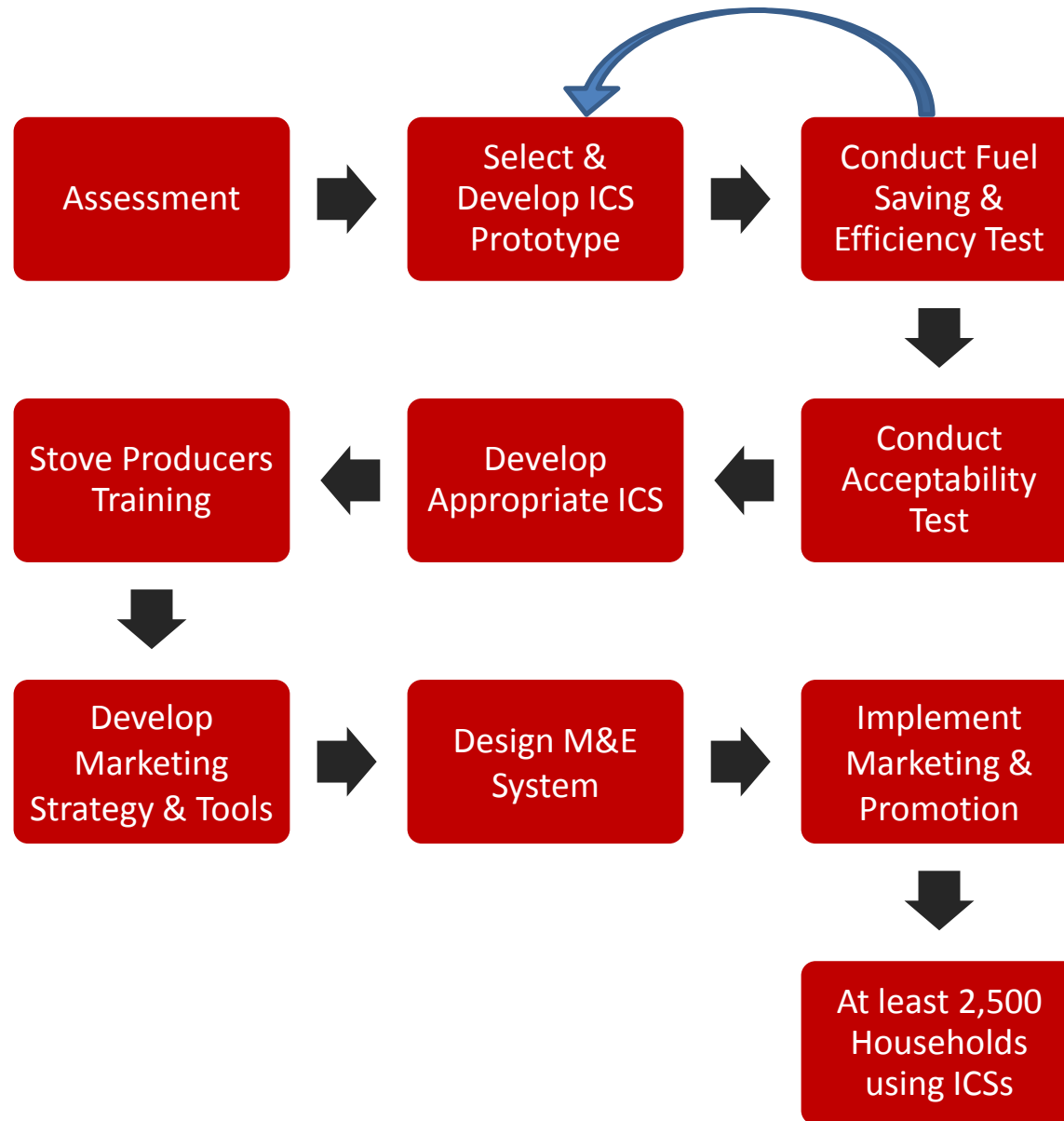
- Kafa Zone

| Woreda | Kebele |
|--------|----------------|
| Adiyo | Boka, Mera |
| Decha | Gedam, Awurada |
| Chena | Shishinda |
| Gimbo | Araba |

- Focuses on households
- Rural and semi-urban areas



How?



Result!

An Assessment of Household-Cooking Energy Demands and Facilities has been done

- Majority of HHs are cooking using three-stone stoves
- Injera, bread and kotcho backings and stew cooking stoves are the most needed stoves
- Two types of Mitads are preferred by the HHs (injera 57-61cm, bread and kotcho 48-52cm diameter)
- 11,200 Mirt stove disseminated with free of charge
- Lack of ICS markets (10 stove production units established)
- HHs want to get the ICSs with free payment
- Most HHs knows about ICS but they do not know from where to get
- Lack of synergy among different stakeholders
- Potential fuel types and fuel efficient stoves identified (**Stoves:** Mirt, Tikikil, Arif, briquette, gasifier stove and composite mitad, **Fuel:** Dry and wet coffee husks, dried bamboo trees and branches, agricultural residues)



Current Engagement

- Development of appropriate ICS prototypes
 - Modify Injera baking Mirt stove 57-61cm ,
 - Kocho & bread baking stove 48-52cm,
 - Gasifier stove for cooking
 - Multi-fuel Tikikil stove (briquette, fuelwood, charcoal) for cooking

