Capacity Building and Quality Assurance to Promote Climate-Friendly Cooking in Kenya

The Green Climate Fund (GCF) Project 'Promotion of Climate-Friendly Cooking in Kenya and Senegal'

This project is a collaboration between the Ministry of Energy (MoEP), GIZ-EnDev Kenya, Practical Action (PA), Mercy Corps, Dedan Kimathi University of Technology (DeKUT), Greenbelt Movement (GBM), Kenya Tea Development Agency (KTDA) Foundation, and the Clean Cooking Association of Kenya (CCAK). The Kenyan component of the EnDev GCF Project, 'Promotion of Climate-Friendly Cooking in Kenya and Senegal,' was designed to address greenhouse gas (GHG) emissions stemming from the unsustainable use of wood-based fuels in the household cooking sector. This sector is the largest contributor to GHG emissions in Kenya's energy sector, accounting for 70% of the total emissions. The project aims to catalyze a paradigm shift by accelerating the growth of the Improved Cook Stove (ICS) sector through irreversible market transformation. This transformation will significantly increase the production and sales of ICS, while also improving product quality. Strathmore University, through its Energy Research Centre (SERC), plays a key role in this initiative under the GCF/GIZ EnDev Kenya Project. SERC's sub-project focuses on capacity building for stove producers and last-mile entrepreneurs, aiming to enhance business development capabilities and ensure quality assurance.



The stove testing team (Ted Juma and Franklin Kiptoo) diligently showcases the equipment and processes involved in our rigorous stove testing procedures at the ICS laboratory.

SERC has developed a Business Development Support (BDS) toolkit to guide ICS producers, last-mile entrepreneurs (LMEs), end-users, and development partners in establishing and managing sustainable cook stove enterprises. The toolkit's primary goal is to equip entrepreneurs with the skills necessary to manage their businesses effectively and increase the number of small and medium-sized enterprises (SMEs) engaged in profitable ICS ventures. This, in turn, will lead to greater adoption of ICS at both household and institutional levels. The toolkit includes a comprehensive BDS training manual (available at the provided link), along with coaching and mentoring services. To date, over 500 entrepreneurs from various counties including Nairobi, Makueni, Laikipia, Kisumu, Kericho, Mombasa, Nyandarua, Nyahururu, and Nyeri have benefited from these training programmes.

As part of its quality assurance efforts, SERC has established a state-of-the-art cook stove testing facility, which is currently preparing for accreditation and official launch. The laboratory is equipped to conduct thermal efficiency tests, safety and fuel consumption tests using the Water Boiling Test (WBT) 4.2.3 protocol, and ISO 19867-1:2018 standards. Thus far, the lab has conducted 130 tests for the project, including WBT, ISO, and Controlled Cooking Tests (CCT). Additionally, SERC has carried out stove production center and market surveillance activities in the Lake and Coastal regions, with stoves sampled from both production centers and supermarkets. The



A sample of an improved biomass cookstove (ICS)

SERC cook stove laboratory is undergoing training to achieve ISO/IEC 17025:2017 accreditation. The project yields significant social benefits, particularly in health improvement and job creation, by increasing incomes and expanding markets within the ICS value chain. Additional benefits include reducing energy poverty and providing new opportunities for education and income generation, particularly for women. This initiative contributes to several Sustainable Development Goals (SDGs):

- **SDG 1:** End poverty in all its forms everywhere
- **SDG 3:** Good health and well-being
- **SDG 5:** Gender equality
- **SDG 7:** Ensure access to affordable, reliable, sustainable, and modern energy for all
- **SDG 13:** Take urgent action to combat climate change and its impacts

Impact: The project is strengthening the framework conditions for the ICS supply and delivery chain, while also enhancing consumer demand and improving the ICS market environment through policy support at both the national and county levels