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CLIMATE-FRIENDLY COOKING – A DRIVER FOR CHANGE IN REDUCING CO₂e EMISSIONS

Supporting the Governments of Kenya and Senegal in reaching their
Nationally Determined Contributions (NDCs)

Context

One third of the global population uses solid biomass like wood or charcoal as their main cooking fuel. Biomass-based cooking with open three-stone fires or inefficient stoves, emits one quarter of global black carbon emissions worldwide. Black carbon is a fraction of particulate matter (PM), a short-lived climate pollutant, and the second largest contributor to climate change (after CO₂). Further CO₂ emissions from cooking amount to 2% of the global CO₂ emissions. Inefficient biomass-based cooking is therefore a large contributor to climate change, forest degradation, and causes household air pollution resulting in severe health hazards. According to the Intergovernmental Panel on Climate Change (IPCC), replacing traditional open fires with improved cookstoves (ICS) has a global mitigation potential between 0.6 and 2.4 gigatons of CO₂ equivalent per year.

In Kenya and Senegal, cooking on three-stone open fires or using inefficient stoves is still widely spread: In Kenya, over 80% of the population rely on biomass as the primary source of energy for cooking and heating while in Senegal this number represents over 50% of the population. Due to this, the potential for reducing greenhouse gas (GHG) emissions in both countries via ICS technologies is large - it could prevent an additional 25 megatons (Mt) of CO₂ equivalent emissions by 2030.

PROJECT FACTS

Project period	01.2020 - 12.2024
Components	Kenya, Senegal, Global
Approved budget	57.17 million
Political Partners	Kenya: National Treasury, Ministry of Energy Senegal: Ministry of Petroleum and Energy, Ministry of the Environment, Sustainable Development and Ecological Transition
Executing Entities/ Implementing Partners	Kenya: GIZ, Ministry of Energy, Dedan Kimathi University of Technology, Energy for Impact, Green Belt Movement, Kenya Tea Development Agency Foundation, Practical Action, Strathmore University Senegal: GIZ, Concept, Enda Energie, Enda Ecopop

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In Cooperation with



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Ousmane Thiam, a producer of improved cookstoves based in the Dakar region of Senegal

Project Approach

The project “Promotion of Climate-Friendly Cooking: Kenya and Senegal” (EnDev/GCF) commissioned by the Federal Ministry for Economic Cooperation and Development (BMZ) and co-financed by the Green Climate Fund (GCF), Kenya’s Ministry of Energy and Senegal’s Ministry of Petroleum and Energy and Ministry of the Environment and Sustainable Development takes a holistic approach in promoting clean cooking technologies. The aim of the project is to accelerate the growth and transformation of the ICS sector in order to reduce national consumption of non-renewable biomass and thus lessen greenhouse gas emissions. The project supports the Governments of Kenya and Senegal in reaching their sector specific NDC targets until 2030.

The project’s market-oriented approach focuses on the demand as well as supply side, knowledge creation and exchange. Supply side interventions comprise professionalising the ICS production, expansion of the distribution and retail chains including intensive marketing and facilitating access to finance for ICS enterprises. Demand side interventions comprise awareness creation and behavioural change campaigns. Further interventions for facilitating a supportive enabling market environment are implemented.

In addition, the project aims to improve awareness on ICS and their contributions to NDC targets by facilitating knowledge exchange with international sector stakeholders.

Impact

The project will significantly increase the number of ICS users amongst rural and most vulnerable populations in both countries, directly benefitting 11.23 million people. Of these beneficiaries, 1.91 million are mainly rural households, including 610,000 women-headed households and 5.57 million children. The project significantly limits consumption of non-renewable biomass for cooking. This will lead to emission reductions of 6.47 Mt of CO₂ equivalent during the project period and to an additional reduction of about 25 Mt of CO₂ equivalent until 2030. In addition, an increase in applied ICS technologies also reduces the likelihood of respiratory illnesses and the time spent collecting firewood and cooking, indirectly promoting income-generating activities.

Success factors

The project is associated to the Energising Development (EnDev) partnership and builds on the huge success of the EnDev programme which has extensive experience in successfully promoting markets for ICS globally and has already had large success in growing the domestic ICS markets of Kenya and Senegal. The EnDev programme is currently being implemented in 21 partner countries. By December 2020, EnDev provided 23.8 million people with access to modern energy including 17.6 million household members with improved cooking solutions.



Stella Nyagol, a member of the Keiyo Pottery Womens Group, that produces a variety of improved cookstoves based in Kisumu county in Kenya.

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