

# Carbon Offset Project Profile

## COOKSTOVES IN UGANDA

Around 95% of Ugandan households rely on biomass fuels to meet their energy needs, with the vast majority cooking over metal charcoal stoves. These stoves emit large quantities of CO<sub>2</sub> into the atmosphere contributing to climate change, as well producing other harmful gases that present a serious threat to human health. Traditional use of biomass fuels has placed increasing financial pressure on poor Ugandans as local forests are logged for fuel wood. Invasive clear cutting of Uganda's remaining forests also has very serious consequences for public health.

Indoor air pollution accounts for some 20,000 deaths in Uganda every year, with those most at risk being women and children. 23% of children under 5 suffer from acute respiratory infection related disease, one of the leading causes of mortality in the region.

The Ugastoves project disseminates efficient wood and charcoal cook stoves throughout Uganda to reduce dependency on traditional biomass fuels. By replacing traditional cook stoves with fuel-efficient stoves in households and restaurants, the project reduces greenhouse gas emissions, relieves pressure on local forests and assists in reducing the incidence of chronic respiratory disease, improving livelihoods in poor communities.

The improved cook stove technology has been found to reduce household fuel consumption by around 36% on average, providing greenhouse gas abatement of 1.53t CO<sub>2</sub>e per year per family.



### Key Facts:

**Location:** Kampala region, Uganda

**Project type:** Energy Efficiency

**Project standard:** Gold Standard

**Total emission reductions:**  
1.53 tCO<sub>2</sub>e p.a. per family

**Validator:**  
TÜV Rheinland

**Verifier:** Bureau Veritas



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**CARBON REDUCTION INSTITUTE**

Suite 1304, 213 Miller Street, North Sydney NSW 2060

P: 1300 708 401 | F: +61 2 8228 7350 | [www.noco2.com.au](http://www.noco2.com.au) | [info@noco2.com.au](mailto:info@noco2.com.au)



## TECHNOLOGY BRIEF – HOW IT WORKS

The improved charcoal stove reduces fuel consumption by introduction of an insulated combustion chamber which increases combustion efficiency and retains heat. The wood stoves use the well-proven rocket technology, which consists of an insulated elbow-jointed combustion chamber that increases combustion efficiency and retains heat while also raising the cooking pot to the hottest point above the flame. The institutional rocket stoves further increase heat transfer by having the cooking pot rest within a skirt.

## SUSTAINABILITY BENEFITS

The Ugastoves project is responsible for providing improved livelihoods for Ugandan mothers and children by providing exposure to fewer hazardous air pollutants and other particulate matter. Air pollution from cooking with solid fuels is a key contributor to childhood pneumonia and many other respiratory and cardiovascular diseases.

The project also carries significant social benefit in the form of direct and indirect employment for enterprises, manufacturing, distributing, retailing, and maintaining the stoves. The success of the project has created competition in the industry, resulting in the indirect creation of more jobs. Improved employment opportunities together with lower fuel costs for households are key to improving the livelihoods of poor Ugandan community members.

Further to this, the Ugastoves project has played a major role in protecting and maintaining biodiversity by curbing the need for rapid deforestation. By decreasing the demand for fuel, the demand for natural forest resources is relieved, improving natural capacity for carbon sequestration as well as maintaining habitat for native wildlife.



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