

# STOVES FOR AFRICA

Charitable Association 'Lernen Helfen Leben e.V.'

Our charitable association 'Lernen Helfen Leben' (German for 'Learn Help Live') supports NGOs in different African countries with the aim to increase the quality of life of the local people (based on sustainable development goals). One of our main goals is to avoid or minimise the climate change, since many countries in the South are already affected by its negative effects.

The effects due to deforestation are devastating, since trees store water and protect us against heat and severe weather conditions. Trees also protect the soil and convert CO<sub>2</sub> into oxygen.

Manufacturing particularly wood-saving stoves with high efficiency is one of our initiatives to decrease the domestic coal use in order to reduce the deforestation of African forests.

The presented high-efficient charcoal stove was developed together with a students group from Madagascar. Using this newly developed stove will reduce the wood consumption by 70% compared to the traditional 3-stones fireplaces.

## Charcoal stove F2L

Using charcoal instead of wood as burning material has some advantages and disadvantages.

Advantages: Glowing charcoal produces higher, low-soot and longer lasting heat. This means: Less combustion material is needed, the cooking pots do not need to be scrubbed, and less storage room is required.

But: The advantages of charcoal also determine its disadvantages. To produce 1 kg charcoal at least 5 kg wood are required. The higher temperatures destroy the material faster, and the charcoal fumes contain more carbon monoxide (CO). This means: a higher wood consumption, additional costs and weights due to more heat-resistant materials as well as tremendous health dangers. Annually, more than 1 million women and children die from respiratory diseases due to flue gas or fume.

The here presented charcoal stove tries to compensate the disadvantages by its design and to use the mentioned advantages of charcoal at the same time: stainless steel sheets are used as construction material instead of clay, which is much heavier. Stainless steel sheets are relatively affordable in large quantity production.

The fumes will be subsequently burnt in the upper part of the stove. In doing so, the toxic carbon monoxide (CO) will be converted into harmless carbon dioxide (CO<sub>2</sub>).

The material costs are currently at approximately 20 Euro. Additionally, we have to add duty and transport costs – as long as we can not produce locally in Africa. The stoves will be installed on site, not requiring any expensive machinery. The price for a complete stove adds up to approximately 60 Euro.

## Introducing ourselves

Since many years the non-profit association 'Lernen Helfen Leben e.V.' is active in many ways in eight African countries: Burkina Faso, Kenya, Kongo, Madagascar, Namibia, Nigeria, Togo, and Chad.

We work together with local partners in these countries: men and women, our African friends, that we all know personally. Regular mutual visits allow us to deepen our relations - a very important precondition for successful project work. Our African partners organise the projects locally in their own countries and report regularly on the project progress and status via telephone, Skype, or email. We only pursue one target: to increase the quality of life for all people in these countries, following the Sustainable Development Goals (SDG of the UN, source: <http://www.welthungerhilfe.de/en/sustainable-development-goals.html>)

Learn more about 'Lernen Helfen Leben': [www.l-h-l.de](http://www.l-h-l.de)

We receive financial support by governmental organisations (BMZ, Engagement Global, Umweltlotterie Niedersachsen, and many more) in form of proportionate financing, which means we have to provide own contribution between 10 and 25 percent. Without the financial support of our members and friends we would not be able to operate.

Support our projects one-time or regularly.

IBAN: DE86 2806 4179 0135 8758

Volksbank Vechta

Account holder: Lernen Helfen Leben (LHL)

LHL is registered as a nonprofit organisation at the tax office in Vechta (Niedersachsen) under the St.Nr. 68/201/0661. At the turn of each year, we provide donation receipts that can be presented to the tax office.

