

Jiko Bora



Why to choose this solution?

The Jiko Bora stove is a metal ceramic charcoal-burning stove with efficiency ranging from 35% to 44% compared favorably to traditional charcoal stoves whose efficiency ranges from 18% to 22%. The higher efficiency of the Jiko Bora stove contributes to reduced charcoal consumption.

Savings per day or production:

Savings of 50 % charcoal compared to traditional metal charcoal stoves.

Cost in money and in own time to construct:

The stove is available in various sizes, ranging from 9, 10, 11, 14, 18, and 22 inches in diameter. Depending on the size of the stove, the prices of the stoves start at 15,000 and can run up to TSh 150,000 equivalent to USD 6.5 to 65. The stoves have ceramic or clay liners enclosed with a metal body. The process to make the stove involves preparing the clay liner, partial sun drying, hardening by firing in the kiln, making the outer metallic body, and assembling the two parts together. Normally, preparation of liner and cladding (metal part) is done by two different production sections. It is estimated that producing one stove might take about 2 hours.

Lifetime:

1-4 years, unless dropped, overloaded with charcoal, or water poured frequently.

Maintenance needed:

If the clay liner breaks while the outer metallic part is still strong, it is possible to replace new one.

Resources needed in use:

Charcoal is the material needed to fuel the stove.

Problems and limits:

Where and how can you get it or make it?

Available in Tanzania, produced by SEECO company and other local entrepreneurs.

Skills needed to produce, install, maintenance, use:

Production requires a skilled potter and trained sheet-metal workers. To produce Jiko Bora stoves, 3-5 days of workshop training are needed. Maintenance and use require only a short introduction.

How to use it:

<https://www.facebook.com/TaTEDO/videos/778253385604075>

How to maintain it:**Climate effect (if any):**

The stove's higher efficiency rating reflects engineered improvement over previous models in its more effective conversion of charcoal to heat. Its emissions of smoke and of greenhouse gases are lower than those of older types of stove. Use of Jiko Bora also reduces the amount of charcoal that would have been required for cooking in traditional stoves, thus contributing to reduced deforestation.

Where it is used and how many users are there?

Used all over Tanzania especially in urban area, around 10,000 - 15,000 stoves are produced and sold every month, used by more than 40% of urban households in Tanzania.

Why is it successful?

It is successful because it is more efficient than traditional stoves in fuel consumption, thus saving money which would have been required to purchase charcoal. Increases in the prices of charcoal and of other fuels, particularly in urban areas, also motivates buyers.

If you can make it, a short description, typical problems, materials needed:

Sheet-iron, pottery-clay soil, and insulation/binding material (mixture of cement, vermiculate/rice ashes and water), along with training.

How to make it (if possible):

Requires short trainings.

How is it delivered and by whom?

The main actors in the supply chain for Jiko Bora include suppliers of raw materials, stove producers (SEECO, Sahara, etc.), stove sales agents, and end-users. Producers normally sell Jiko to the sales agents and then end-users buy from the sales agents. It is also possible for end-users to buy direct from the company. Sales agents are available everywhere in the country.

Successful financial model

Initial support was provided by development partners. In the past, the sector received some support from development partners, including investment capital to establish stove-production workshops, capacity-building, stove demonstrations, and awareness-raising. Development partners have also supported advocacy work and development of national strategies, guidelines, and laws.

What policies and strategies helped the success?

Charcoal Policy Study (World Bank 2009); Biomass Energy Strategy of Tanzania (2014), which has the ambitious target of reducing urban charcoal demand by 50% by 2030; and Sustainable Energy for All Action Agenda of 2015, with a goal of enabling more than 75% of the population in Tanzania to use cleaner cooking solutions by 2030. Stakeholders in the sector have also established the Clean Cooking Alliance of Tanzania (CCAT), which intends to coordinate the sector.

More info:

SEECO Company, E: bioenergy@seeco.co.tz , <https://www.facebook.com/SEECOTz/> and <https://www.facebook.com/TaTEDO/videos/778253385604075> .<http://www.tatedo.or.tz>

Sources:

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