

Flame without smoke & smoke on demand without flame



The game-changing mobile Chitofu is here

Prepare high-quality tasty and safe food by frying, boiling, baking, roasting and smoking with very little firewood instead of charcoal

We are constantly listening to our users to adjust technologies to the people. We proudly present the new **mobile Chitofu** for fuel-efficient value addition to many different types of food:

- **smoke, roast, bake, fry or boil** many food types
- **save < 80% of firewood** compared to an open fire
- **no charcoal needed**, only little firewood or twigs
- makes flame without smoke and smoke on demand in separated phases to cure/cook first and then **safely add smoke-flavour to the desired intensity of taste**
- developed in 2022 in Malawi based on proven rocket stove design with additional smoking features

Who can use the mobile Chitofu?

- small-scale fish processors at the lake even without own land or space for fixed smokers
- aquaculture and other farmers who want to conserve and add value to their products
- restaurant owners or street-food vendors
- passionate gourmet home users

What's new?

- Mobility for **full flexibility** (to move the business to another place, e.g. with the seasons)
- **Faster, more efficient and cheaper** than a fixed stove
- Can be used with any size wok or large pot up to 50 l
- Can be **shared** between processors or **rented out** for catering at events or funerals/weddings

New Smoking features for better control and tastier flavour

- Top cover can slide open (easy monitoring from above, efficient moisture removal without chimney, also for smoke-drying during rains without separate drier)
- All-metal inside of smoker for durability (resistance against termites and fire e.g. when baking pizza)
- Better control of air and smoke intensity - hinged doors at ash removal at back, front entrance can be sealed by folding up firewood tray
- Grease pan largely avoids contamination of food with flying soot or hazardous polyaromatic hydrocarbons
- Different smoking cupboards available to suit needs
 - height for 4 to 8 trays (< 30 kg of small fish)
 - width for square trays 60 cm wide, or round 65 cm 'mawayas' from recycled bicycle rims
 - optional additional insulation with plywood finish



Spotless chambo smoked to perfection



Thick smoke on demand to add flavour



Smoking cupboard for 6 mawayas

For more information or orders contact Owen Mbilizi +265 994 49 62 01 or Stewart Munthali +265 999 25 98 02

Technical features (see photos)

- Wok: Reacting to the increased prices of cooking oil, the wok offers an option to fry smaller quantities of small fish with as little as half a litre of oil. Wok is made from recycled metal by local artisans and can be replaced anywhere in Malawi.
- Sliding top cover allows good visibility to monitor the progress of smoking from above without opening the door of the smoker. It also allows to vent out extra moisture and excess unwanted smoke
- Thermometer as educational tool to monitor temperature
- New design of triangles to support mawayas
- Flat parts of smoking cupboard covered in sand to avoid smoke from fat burning on the hot metal
- Hook to close front door of cupboard
- Chitofu can use low-grade alternative fuels to replace firewood

Advantages of mobile Chitofu for programs like GIZ Aquaculture Value Chain Program (AVCP) supporting Fish Farming groups (FFG)

Financial and Livelihoods

- Can be shared between members of a group
- Ideal for smaller quantities of fish when using the intermittent harvesting with the trap, which will enable FFGs to keep their cashflow going.
- Provides security of storage and can also serve as a drying cupboard where the fish can be left in over-night.
- Can also be used to diversify the income base through other productive uses like making juice, parboiling of fish, frying chips, roasting meat etc.
- Could be used for larger pots as well for other occasions to cook for a larger number of people (weddings, funerals, school meals, etc)

Scalability

- Faster construction and delivery time than a fixed stove
- Cheaper, can be replicated easier (ordered from Lilongwe, and sent to destination even by courier)

Durability

- No cracks in the brick walls from flames
- Metal components in the flame path protected by sand collecting the grease. The sand from the smoker cannot break (unlike the plaster in the fixed unit).

Environmental

- Firewood consumption even less than with the fixed units, as there is less mass to be heated up. Firewood use < 3kg per smoking cycle of 2 hours.
- Firewood savings can exceed 80% compared to open fires.
- Firewood may be totally substituted by other alternative fuels that can be sustainably grown like elephant grass, bamboo, pigeon peas etc. Please note that not all fuels or types of fuels are suitable for smoking as some are likely to blacken the fish e.g. pigeon peas, pine wood etc.
- Less climate footprint as user training can be done on the same day as the delivery, unlike with a fixed stove, where training can only happen after some weeks when the stove has dried requiring an additional trip.
- The sand on the horizontal parts above the firechamber prevents grease dripping on hot surfaces and burning off, thus preventing the development of harmful smoke (especially Polyaromatic hydrocarbons). When mixed with the grease the sand becomes part of a circular economy: it can serve as feed for chicken or ducks, while their excrements can be used to fertilise the fish ponds and lead to more fish.

Climate Friendly Food Processing with a mobile Chitofu –

Order your own at +265 994 49 62 01



Frying fish in Wok with only 0.5 l of oil



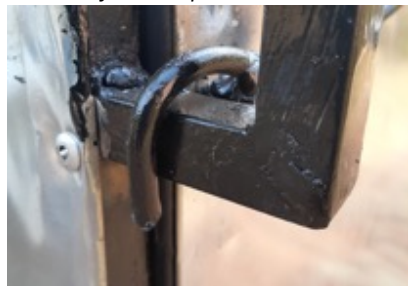
Sliding top cover to monitor progress



Thermometer for temperature control



Inside of smoker protected with sand



Hook to close door of smoker



Smoking with elephant grass