

# SMOKE HOODS

## What is this Action Sheet about?

It is about smoke hoods. People build smoke hoods in their houses to get smoke out of the kitchen. Smoky air is dangerous for health. It causes 1.6 million deaths per year worldwide. Fitting a smoke hood is one of many things that people can do to make their homes less smoky (See Action Sheet 57 for more).

## What is a smoke hood?

A smoke hood is a metal hood built over a stove or open fire. Cooking smoke goes up into a chimney or flue, so that it is taken out of the house. With a well-designed smoke hood, up to 80% of the smoke from the cooking fire goes out of the house.



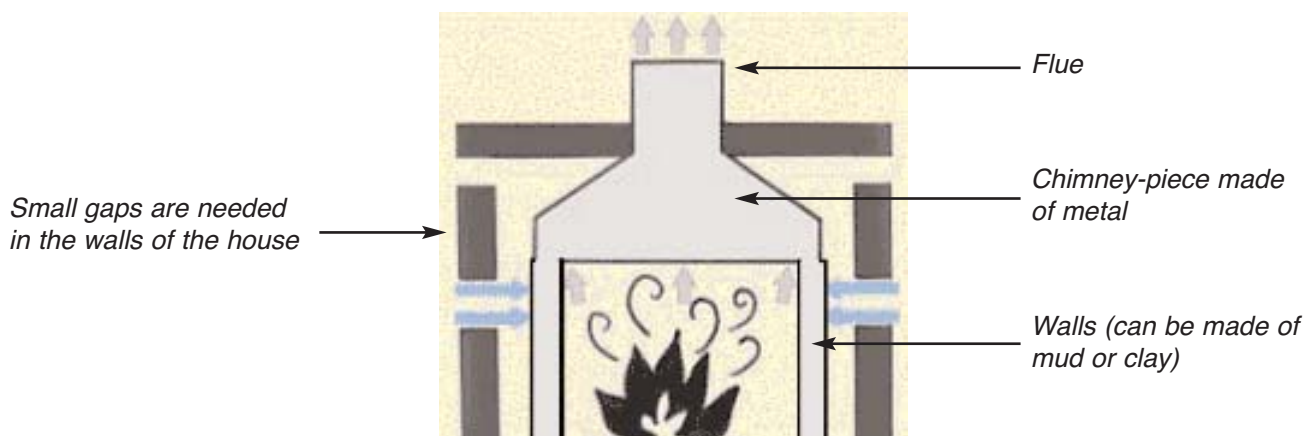
Image: Sarah Watson, PACE

## What are the benefits?

Women with smoke hoods in their kitchens say that their lives are improved because:

- Cooking is cooler and the kitchen more comfortable to work in
- No more headaches, fever or smoke-sickness
- The air is healthier, so you can see and breathe more easily
- Children get less coughs and colds
- Men like to spend more time in the smoke-free kitchen
- There is less soot, so it is easier to keep the kitchen clean

## How do smoke hoods work?



### How a smoke hood works

(Image: Practical Action)

Smoke hoods work because hot air rises. This creates a draught, drawing the smoke up into the flue. As the air blows across the roof of the house, the smoke is drawn up and out of the chimney. This is why the stove or fireplace needs to be kept under the hole leading up the chimney. Even though it might be easier to reach into the cooking pot if it was wider, the walls of the stove area need to be close to the edges of the hood, or smoke will go into the room.

Increased eaves spaces are needed in houses with smoke hoods to help air flow through the house. For more information about making changes to the eaves of your house to make it more pleasant in your kitchen, see Action Sheet 57 on Reducing kitchen smoke.

### **How do you design and make a smoke hood?**

The most effective design of smoke hood and chimney depends on your house and way of cooking. People in Kenya worked with Practical Action (ITDG) to design smoke hoods for their houses. First, they built models of the smoke hoods with thick Manila paper. Using the models, local artisans measured out pieces of heavy gauge galvanised sheet metal and welded them together to make the smoke hoods and chimneys.



**A clay-walled smoke hood**  
(Image: Practical Action)

### **Do smoke hoods need maintenance?**

The smoke hood flue needs to be cleaned out at least twice a year. This stops the flue from blocking up and makes sure that soot does not drop down into the food.

### **How much do smoke hoods cost?**

In Kenya, a metal smoke hood costs 6000Ksh (US\$81), about as much as four goats. To get the costs down to 2600Ksh (US\$35), good quality recycled metal can be used for the hood and chimney, and mud or clay to build the walls, although it may not last as long. Fuel-saving ideas, like haybox cookers and efficient cooking stoves (see Action Sheets 58 - 62) can help households to save the money needed to put in a smoke hood. People could also get together to set up a revolving fund or other credit system to pay for the costs of installation. When the first household has paid the costs back, the next household gets a loan for installation, and so on.

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### **FOR MORE INFORMATION**

Contact Practical Action (formerly known as ITDG): [www.practicalaction.org](http://www.practicalaction.org)