

**Improved Cookstove Programme of
the Philippines (ICS-P)
Products and Services**

Rice-hull Gas Stoves

Rice-hull Cooking Stove

(one-burner, two-burner, household and
enterprise kitchen-type)

Mabaga Charcoal Stove

(with or without bucket)

Maliyab Fuelwood Stove

(with or without chimney)

Solar Water Heater

Solar Water Disinfection (SODIS)

Clay Water Filter

Moringa Water Purifier

8-layer Clay Pot Water Filter

Energy-efficient Kitchen Designs

Indoor Air Pollution and Health

Wastewater Garden

**Solid Waste Management and
Utilization**

Indigenous Food Preparations

Food Hygiene and Sanitation

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Contact persons:

APPROTECH ASIA

Tel. No.: (02) 5276514, 528-4082

Tele/Fax No.: (02) 527-3744

Ms. Feri G. Lumampao

Country Contact Person

fglumampao@aprotech.org

Mr. Ronnie S. Mataga

Programme Coordinator

rsmataga@aprotech.org

**The Asia Regional Cookstove Program
(ARECOP)**

**Improved Cookstove Programme of
the Philippines (ICS-P)**

**MABAGA Charcoal
&**

**MALIYAB Fuelwood
STOVES**

*Energy-efficient fuelwood and
charcoal stoves*

APPROTECH ASIA

www.aprotech.org

G/F, Philippine Social Development Center
Building

Magallanes corner Real St., Intramuros,

Manila 1002, Philippines

Tel. No.: +63-2-5276514

Tele/Fax No.: +63-2-5273744

E-mail address: info@aprotech.org

**Entrepreneurial
opportunities:**

If you have identified source of
clay and are willing to start a
business on pottery or stove
making, APPROTECH ASIA
facilitates the transfer of the
technology, arrange for the expert
potter-entrepreneur to conduct
hands-on experience on stove-
making and enterprise
development.

Training and Networking:

If you are interested in our ICS
products and services,
APPROTECH ASIA conducts
customized training packages upon
request.

MABAGA Charcoal Stove



Mabaga charcoal stove is fuel-saving and heat-efficient. With proper technique of usage and systematic cooking, the **Mabaga** charcoal stove saves from 30-50% charcoal with 37 percent heat efficiency compared to traditional charcoal stove. The medium-sized stove with plain GI sheet bucket weighs an average of 8kg while the plain clay stove weighs 5kg. With bucket, the stove stands 11 inches tall with a diameter of 14 inches while the stove without bucket, stands 10 inches tall with 12 inches diameter. **Mabaga** with bucket can be used for charcoal and small pieces of fuel or twigs of trees. The small cover on top front center should be removed when cooking for ease in adding fuelwood. With proper use and maintenance, the stove can last for years.

Proper use of stove. Place 4-5 pieces or 100 grams of medium-sized charcoal and light with small pieces of paper. When charcoal comes in smaller sizes, add more pieces. Place your pot on the stove when the charcoal is already lighted. Add one piece of medium-sized charcoal at a time until cooking is almost done.

Even when charcoal has turned to ashes, the stove is still hot and can be used to reheat food.

MALIYAB Fuelwood Stove



Maliyab fuelwood stove has one opening for firing but has two-potholes for faster cooking and to save fuel. It stands 9 inches tall, 12 inches wide and 22 inches long. It weighs 5kg. It saves 50% fuel and saves half the time of cooking. It utilizes small pieces of wood, twigs or biomass. This is not designed for large pieces of wood. Some units come in handy with a chimney.

Proper use of stove. Place 3-4 pieces of small fuelwood and start fire using small pieces of paper or biomass. Add 2 pieces of wood at a time until cooking is done.

Rice-husk stove

The **Rice husk** stove is made of galvanized iron. It is portable and can be used in the household kitchen or in restaurants and other institutional kitchen like hospitals.

Rice-Husk Gas Stove

The **Rice-husk** gas stove comes in two models. One-burner and two-burner stoves for household and enterprise kitchen use.



Design and Performance Specification of the Rice Husk Gas Stove

Reactor Inside Diameter	15 cm
Reactor Outside Diameter	20 cm
Reactor Depth	60 cm
Ash Chamber Volume	32 cm x 30 cm x 16 cm
Weight of Rice Husk per Load	0.9-1.2 kg
Ignition Time	1 min for rice husk and 1 min for gas
Operating Time	40 to 50 min depending on the fan setting
Fan Dimension	12 cm D x 4 cm
Fan Rating	16 watt-220 Volt Single Phase
Total Weight	12 kilos
Overall Dimension	50 cm wide x 60 cm long x 100 cm high

WARNING !!!

The rice husk gas stove emits a flammable and poisonous gas. Make sure that the gas produced during operation is burning properly in the burner. DO NOT INHALE THE GAS EMMITED FROM THE STOVE BECAUSE IT IS TOXIC AND INJURIOUS TO HEALTH. The stove should only be operated in a place where there is enough air ventilation to minimize suffocation from gases.