Sazawa

Sazawa is an Improved Charcoal Stove developed by TaTEDO; the stove is made up of metal sheet, round bars and two clay ceramic liners (fireboxes), which are bounded together to metal body by mixture of cement and rice husk ashes. Intended to save a significant amount of charcoal consumed in the cooking meals in the households. Laboratory test revealed efficiency of about 44%. Features of Sazawa include the following;

- Each of the three legs is incorporated with pot-rest holders.
- Presences of vermiculite or rice husk ashes and cement serve two purposes, prevention of excessive heat loss and provision of bondage media between metal ring and liners.
- It needs very little metallic cladding, compared to other designs due to presence of ceramic cladding.
- If either inner or outer liner get broken it can be replaced.

How does Sazawa operate?

It has casing, insulation and limited numbers of holes therefore heat escapes directly to the top, where cooking process take place. Quality of stove is improved due to the following;

- Presence of double liners, insulation and limited number of holes; heat losses is minimized.
- High specific heat capacity of clay line it possesses, cooking can be conducted with a very little amount of charcoal and short time as well.
- Process of cooking can be fast or slow depending on the air inflow through an air gate, which is controlled by the door.

Advantages of Sazawa Over traditional charcoal stoves

- Charcoal consumption is low compared to other types of stoves with single liner or traditional one, charcoal saving is more than 50% compared to the traditional charcoal Stove.
- Efficiency for heat energy utilization is high due to minimum heat losses.
- Health of user is improved since it is free from smokes, which consist of greenhouse gases.
- It provides self-employment in informal sectors to the artisans and potters, who have skill of producing those cladding and liners respectively.
- Poverty alleviation, most of food vendors as well as household users they prefer using Sazawa due to minimum charcoal consumption.
- Reduces deforestation rate and hence it is lessening desertification rate.
- It has longer life span than tradition charcoal stove.
- There is no burning to the user.
- It is versatile in using several fuels such as charcoal and palletised biomass fuels.
- It is serviceable because liners can be replaced.
- It needs very minimum sheet of metals for cladding manufacturing.
- It is heat shock resistant (boiling liquid splashing during cooking does not affect liner)

Use, care and precautions for using Sazawa

- DROPING DOWN IS NOT ADVISED as liner may break, because it does not resist impact stress.
- DO NOT break large pieces of charcoal inside the stove, you may break a liner.
- Fan the fire after light through the air gate.
- For fast or slow cooking open or close the air gate respectively.
- DO NOT shake the stove in order to remove excess ashes, instead use a piece of stick or cooking stick handle gently stir the charcoal until the ashes drops down to the tray through fire grates. Because shaking may cause liner to get loose.
- DO NOT pour water on the stove to extinguish the fire when cooking is over so that to avoid excessive heat shocks.
- To extinguish the fire, first pour out the ashes and burning charcoal out on the ground, use water or sand to put out the fire.

Traditional charcoal stove - STOP ITS USE

Sazawa filled with burning charcoal - PROMOTE ITS USE

Sazawa view without charcoal

About TaTEDO

TaTEDO is a coalition of individuals, professionals, artisans, farmers, Community Based Organisations (CBO) and Enterprises. Involved in the development and promotion of Renewable Energy Systems (RES) for enhancing sustainable environment and socio-economic development of communities in Tanzania. The organization was registered in 1990 as a National non-governmental non-profit sharing Organisation.

Problem

Renewable Energy and Bioenergy in particular accounts for over 91 percent of total energy consumed in Tanzania. To provide modern energy services most of the country efforts are directed to the development of electricity infrastructure and provision of fossils fuels, which accounts for only 9 percent of the total energy consumed; and is accessible to less than 10 percent of the population mostly living in urban areas.

Further more due to population pressures; the supply of energy continues to decline. Energy insecurity and the resulting environmental degradation are contributing to the increased poverty situation in the country. Sustainable provision of better energy services, which are affordable by the majority of the population, is the foundation of TaTEDO's efforts for Renewable Energy Systems development and promotion.

Vision

Poverty free and self-reliant communities in Tanzania accessing sustainable modern energy services.

Mission

Advancing popular access to sustainable modern energy technologies in marginalized communities in Tanzania, through technological adaptations, capacity building, community mobilization and advocacy for increased access to sustainable energy services, poverty reduction, environmental conservation and self-reliance.

Goals

The goals of TaTEDO are: -

- To improve quality of life of Tanzanians by contributing to availability of improved and sustainable modern energy services, employment and income generating opportunities, which are essential for poverty reduction.
- To reduce environmental degradation resulting from increased use of wood and fossil fuels.
- To assist the country to reduce the dependence on imported energy.

For more information please contact:

Executive Director

TaTEDO
P.O.Box 32794,
Dar es Salaam, Tanzania
Phone: 255-22-2700438/2700771
Fax: 255-22-277400
E-mail: energy@tatedo.org
Website: http://www.tatedo.org

Physical Addresses
Off Shakilango Road, Near Institute of Social Work, Kijitonyama, Dar es Salaam, Tanzania.

TaTEDO – Centre for Sustainable Modern Energy Expertise

SAZAWA CHARCOAL STOVE

Use Sazawa Charcoal Stove for money and fuel savings while conserving the environment.