

Biomass Briquettes

Smokeless Clean Energy Solution





Bio-briquetting is a process through which biomass waste can be easily converted into high-density fuel briquettes. This can serve as substitutes for fuelwood to meet household-level cooking and heating needs.

Advantages of Bio-briquetting

1. Environment Friendly

Bio-briquettes can be created from easily available biomass waste often found in rural settings. Bio-briquettes are an environment-friendly clean energy source because:

- they reduce dependence on fuelwood,
- their net calorific value is comparable to fuelwood,
- they turn waste into energy.

2. Affordable

Bio-briquettes can be made by hand from any freely available organic matter, including invasive species and agro-waste. They are made from inexpensive metal moulds, each one of which can produce countless Bio-briquettes.

3. Smokeless

Combustion of fuelwood has been linked to several health hazards in rural households. Bio-briquettes provide a safer alternative as a smokeless fuel.



4. Easy to Use

Forest-PLUS' Bio-briquette trainings in Sikkim, have successfully demonstrated their applicability and acceptability as a viable fuel source in rural households. As a compact fuel, Bio-briquettes are easy to store and can be used throughout the year.

Making Bio-briquettes

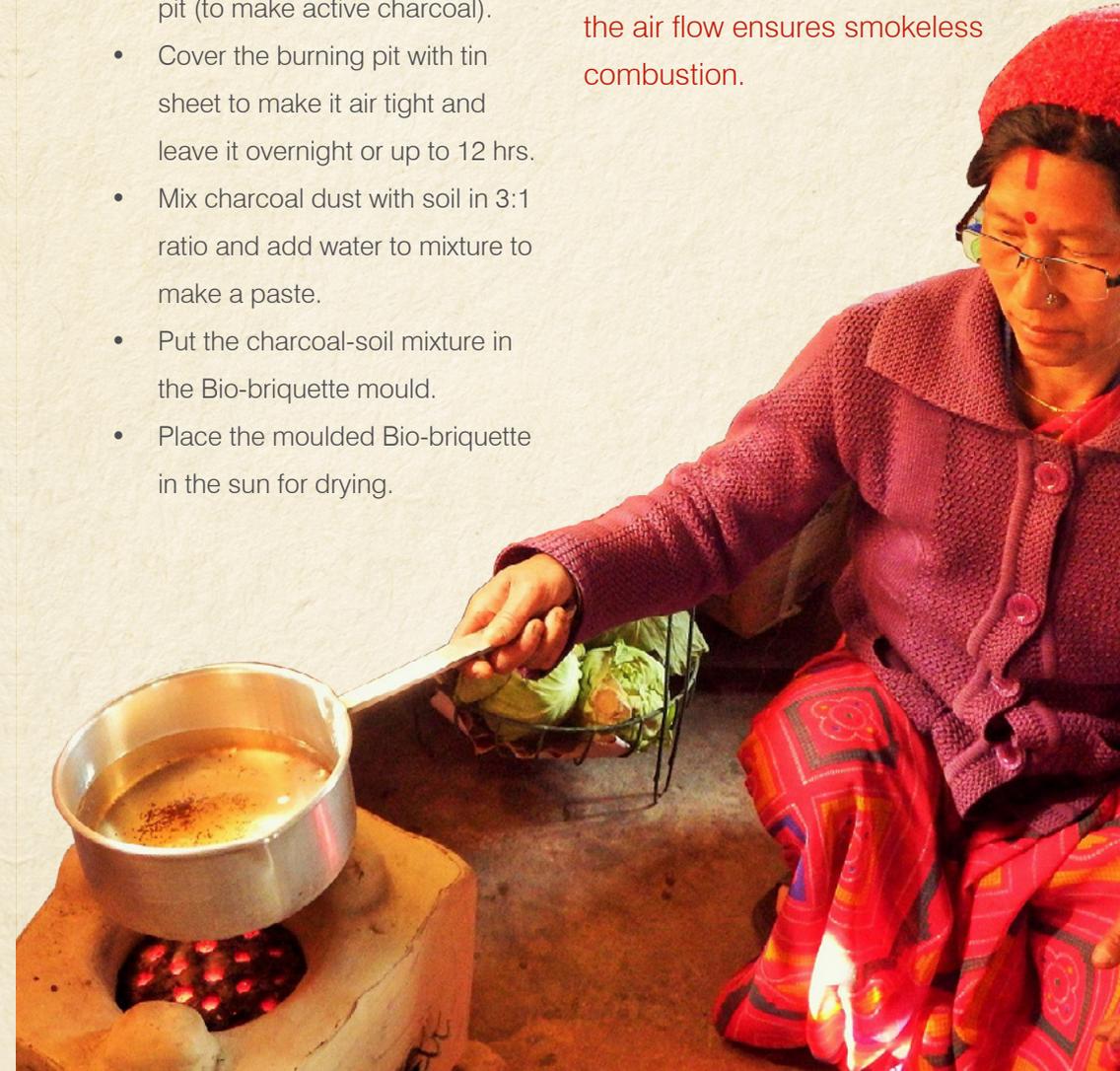
Materials Required

Metal mould, biomass waste, soil, and water.

Process

- Collect and dry biomass waste.
- Partially burn the dried waste in a pit (to make active charcoal).
- Cover the burning pit with tin sheet to make it air tight and leave it overnight or up to 12 hrs.
- Mix charcoal dust with soil in 3:1 ratio and add water to mixture to make a paste.
- Put the charcoal-soil mixture in the Bio-briquette mould.
- Place the moulded Bio-briquette in the sun for drying.

Bio-briquettes can be used for cooking or heating. They can be ignited easily using waste paper or dried leaves and twigs. Once the lower portion catches fire, the flames start coming up through the holes in the briquette; the air flow ensures smokeless combustion.





Scaling up Bio-briquetting in Sikkim

Forest-PLUS program has taken an active role in promoting Bio-briquettes as a clean energy source, in order to help reduce pressure from fuelwood extraction on Sikkim's forest cover. Forest-PLUS is scaling up Bio-briquetting training under a partnership with NABARD through a grant to Forest-PLUS partner IORA Ecological Solutions.

Under the partnership, NABARD is providing Bio-briquetting training for 300 community members as well as moulds for 30 beneficiaries. Forest-PLUS is proud to be working alongside Forests, Environment & Wildlife Management Department (FEWMD), and NABARD to facilitate access to this clean energy solution for rural households in the state.



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