



ALTERNATIVE ENERGY SOURCE THROUGH WASTE MANAGEMENT AND ITS HEALTH IMPLICATIONS

INTRODUCTION

Inadequate knowledge of the effect of waste in our environment and its economic importance has led many items to remain “waste” for centuries. The ability to convert waste into something useful as a source of day-to-day energy supply for domestic use and a means of livelihood is a great investment in health and environmental management.

Looking at the amount of waste in our communities (***Industrial or Agricultural waste***), this slides take us through the conversion of solid waste into solid fuel which is believed to replace the use of fossil fuel, firewood, and charcoal.

There is a need to create awareness, engage government stakeholders for effective and efficient rules and sanctions, trainings, and support with tools/ machines by actors (be it humanitarian or government bodies).

This will help in fighting against the high rate of death recorded by the use of firewood and can also serve as a means of livelihood, this will also help to ***“SAVE our TREES and SAVE OUR PLANET***

For this purpose, we will discuss on the most tested and trusted alternative cooking fuel, produced with waste (biomass) and other healthy materials which would be discussed in the following slides.

Some Health Comparative Analyses

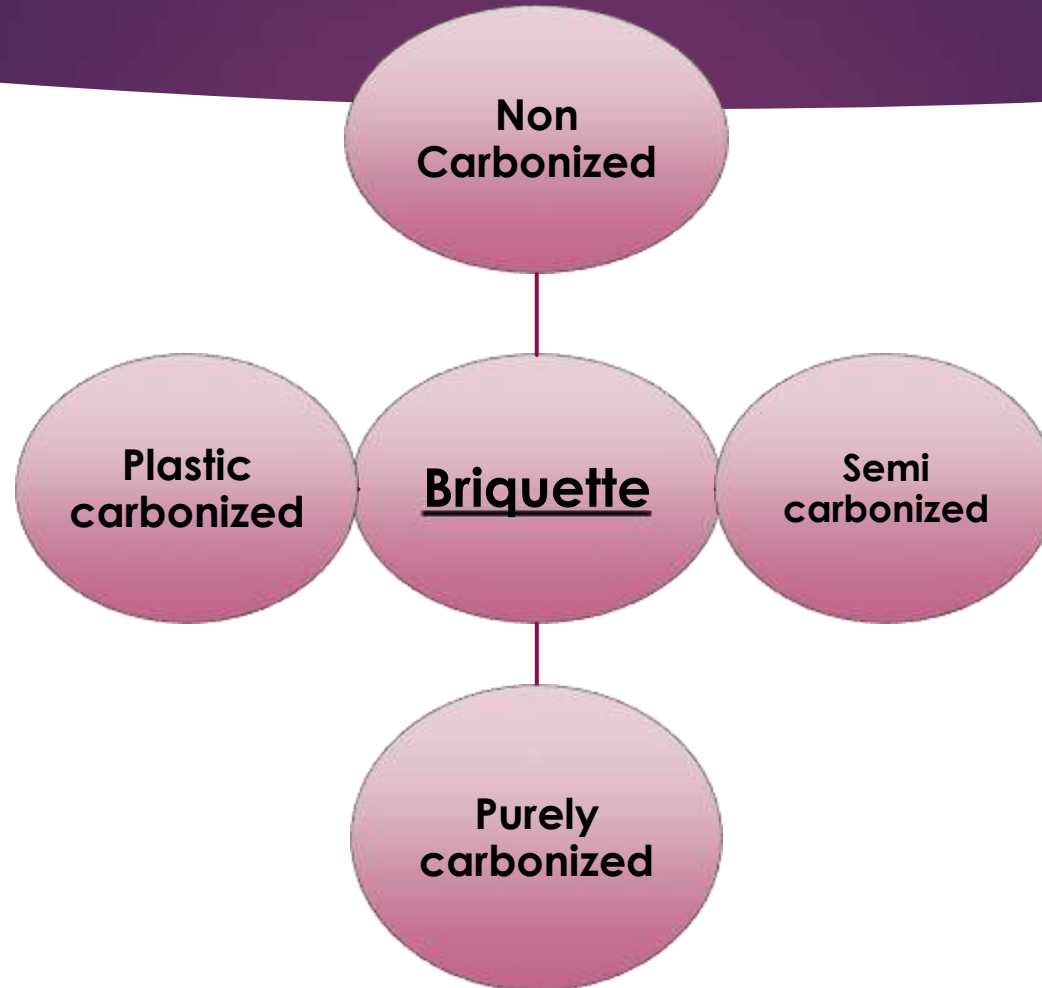
Firewood

- Using of traditional 3 stone fire which is not efficient and waste a lot of heat produce per time
- Highly inefficient combustion (waste of energy)
- Release mass greenhouse gases
- Decreased lung function;
- Negative impact on climate change
- Aggravated asthma
- Irregular heartbeat
- Premature death in people with heart or lung diseases

Briquette

- Using fuel efficient stoves which improve cooking time thereby saving cooking time.
- Efficient combustion
- Releasing fewer greenhouse gases
- Burn cleaner
- Climate friendly
- Mitigate tree cutting
- Production process is healthy

Types of Briquette



Common Instruments and material required for briquette production

- ▶ **Extruding Machine:** Manual, semi manual and Automated
- ▶ **Biomass:** Rice husk, Corn cobs, Saw dust, sugarcane bagasse, Groundnut shells. Etc.
- ▶ **Binder:** Cassava starch, Arabic gum, Parka pulp
- ▶ **Water**

ELEMENTS OF A STANDARD BRIQUETTE

To determine a good briquette, these are the major parameters of measurement.

Igniting time

Durability

Longevity

Smoke Emission

Heat production per time

Reusability



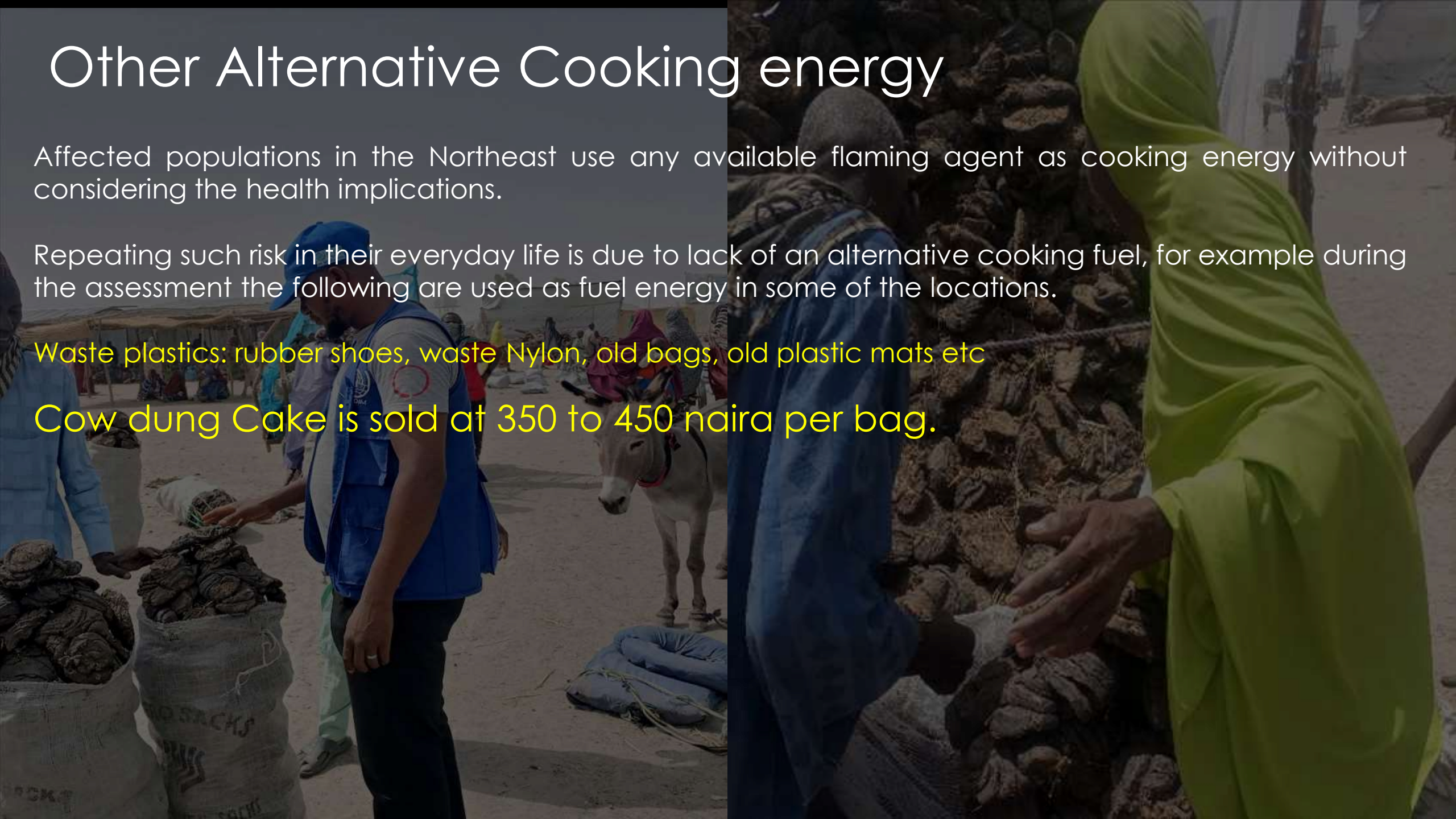
Other Alternative Cooking energy

Affected populations in the Northeast use any available flaming agent as cooking energy without considering the health implications.

Repeating such risk in their everyday life is due to lack of an alternative cooking fuel, for example during the assessment the following are used as fuel energy in some of the locations.

Waste plastics: rubber shoes, waste Nylon, old bags, old plastic mats etc

Cow dung Cake is sold at 350 to 450 naira per bag.



Local Agricultural alternative cooking Energy

Ethanol Liquid fuel



Jatropha Liquid fuel



Briquette Solid fuel





THANK YOU