



Use of bamboo for energy production

National Dialogue on wood energy and forest Landscape
Restoration in Ghana



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BAMBOO AND INBAR





Monopodial (Running) Bamboo

Sympodial (Clumping) Bamboo





SDG 14 – Climate Change Action

SDG 15 – Ecosystem Management

SDG 12 – Resource efficiency

SDG 1- Poverty Reduction

SDG 11 – Sustainable construction

SDG 7- Renewable energy

RENEWABLE ENERGY



Demand for charcoal is increasing as electricity, oil and LPG price increases



Previously most wood supply for charcoal production was from off-reserve sources.



Increasingly, the forest reserves are also being exploited for illegal charcoal production

Charcoal Industry Background

provide nearly
440,000 full
time jobs

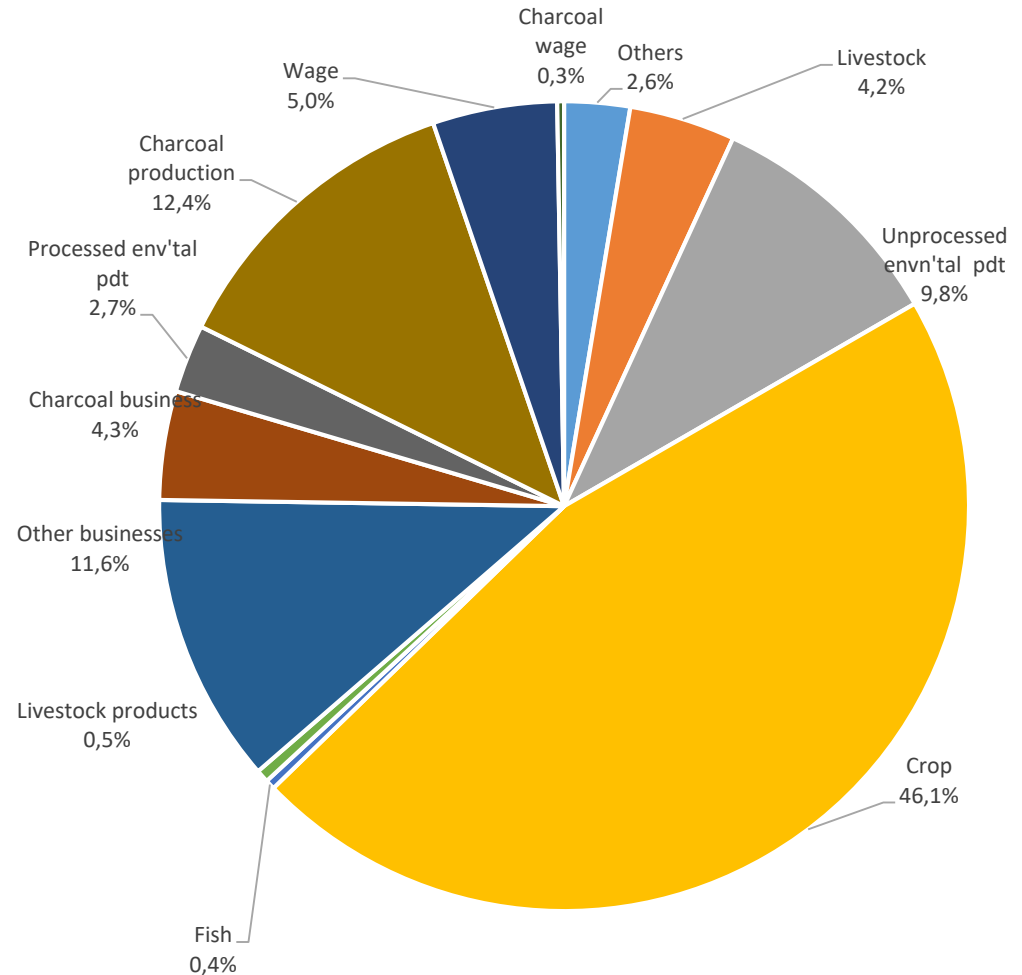
32%
household
usage

charcoal will
continue to be
critical within
Ghana's energy
mix

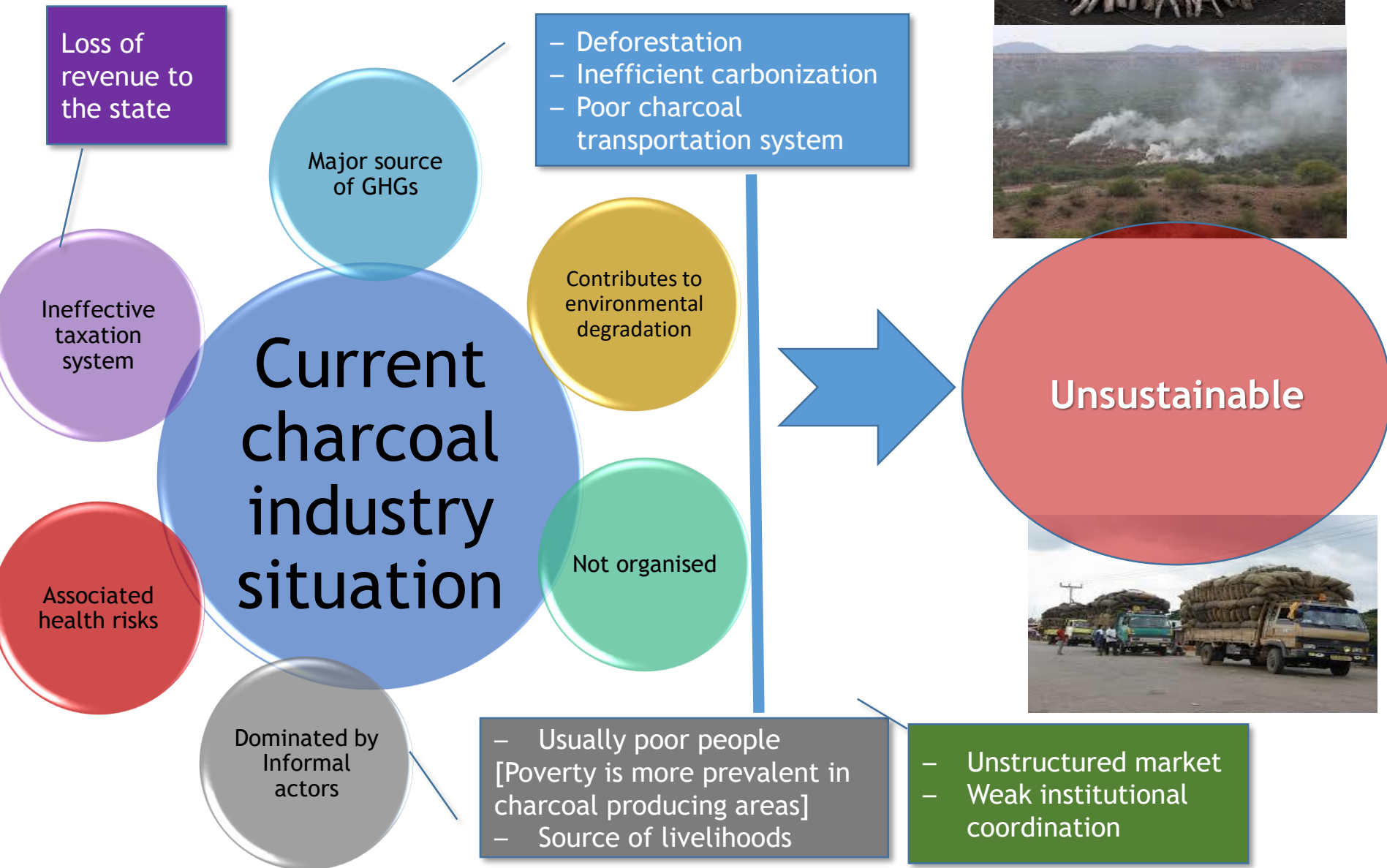
estimated
market : US\$
70 million

Economic importance, sources and proportion of household income

- Charcoal is second and accounts for 17% of total HH income – i.e., 4.3% from charcoal businesses, 12.4% from charcoal production, and 0.3% from charcoal wages.



However...



Declined
feedstock



Continues
degradation

Continues
loss of
potential
revenue



No Action

Increase
More GHG
emissions



Endanger
health



Affect
livelihoods



BAMBOO CHARCOAL & BRIQUETTE INTERVENTION

BAMBOO SPECIES DIVERSIFICATION





30,000 Free-range chicken that produce natural fertilizer and are fat

BAMBOO AGROFORESTRY-AGROFORESTRY



BAMBOO AGROFORESTRY

3-12 months



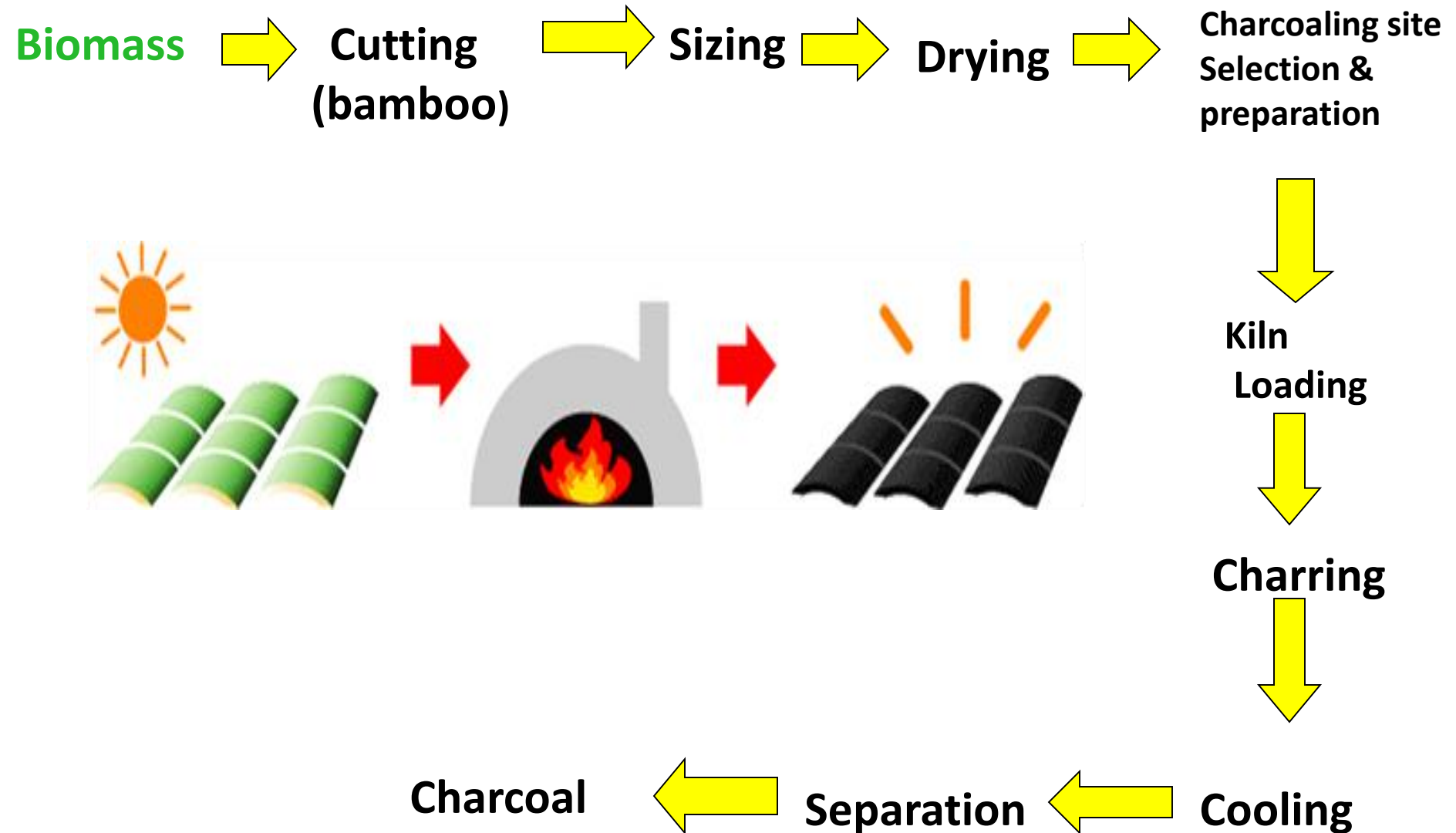
BAMBOO AGROFORESTRY (Fire tolerant Bamboo)



BAMBOO AGROFORESTRY- (Bamboo after rains)



BAMBOO CHARCOAL PRODUCTION PROCESS





Provision of facilities





BAMBOO CHARCOAL RESEARCH AND PRODUCTION




BAMBOO APPLICATION



ervations

➤ Bamboo charcoal quality good as wood charcoal.....women & household users



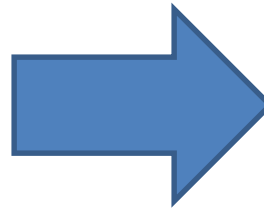
**2 – 25 tons/Ha for monopodial bamboo.
2 – 40 tons/Ha for tropical bamboo.**

- Calorific value of 6500-7000 Kcal/Kg
- Smokeless
- 1-3% ash
- No sparks
- No smell



BAMBOO BRIQUETTE

ROLL PRESS BRIQUETTE MACHINE



VIDEO

BAMBOO BRIQUETTE

Using ball briquettes with improved stoves



Burning ball shape charcoal briquettes

- Briquettes burn out much longer and give off intense, steady heat.
- Charcoal briquettes are ideal for cooking, barbecues, boiling etc.
- A handful of briquettes would cost less than a big lump of charcoal since they last longer, give off intense heat.

Thank you

