



Environmental Crisis or Development Opportunity?

The potential for
charcoal sector reforms
in Sub-Saharan Africa

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Structure of the Presentation

1. Background – Why back to woodfuels?
2. Charcoal Case Study – Tanzania
3. Outlook – Vision, Next Steps, and TF-ESSD activities



Why back to woodfuels?

Woodfuels and Energy Consumption

Parameters			
Woodfuels of total energy consumption	[%]	20%	90%
Amount of wood used for energy	[m3]	6 million	36 million
Forest land share	[%]	73	38
Forest cover	[ha]	21 million	38 million
Per capita electricity consumption	[kwh]	16,780	54

- Woodfuels as part of the energy portfolio
- Complementary to electricity access
- Woodfuels as a sector of the national economy

Energy Access - A Triple Bottom Line

Environmental Sustainability:

- Maintaining natural resource base
- Low carbon growth



Economic Feasibility:

- Cost recovery
- Imports vs. domestic production



Social Equity:

- Reduce energy poverty
- Access to the poor



Case Study: Tanzania

5 Facts about Charcoal Sector in Tanzania

1. Charcoal sector : USD350 million annually
2. Employment & livelihoods: several hundred thousand people
3. Revenue loss: 100 million annually
4. Increase share of HH in using charcoal :
47% in 2001 => 71% in 2007
5. 1% urbanization => 14 % increase in charcoal consumption



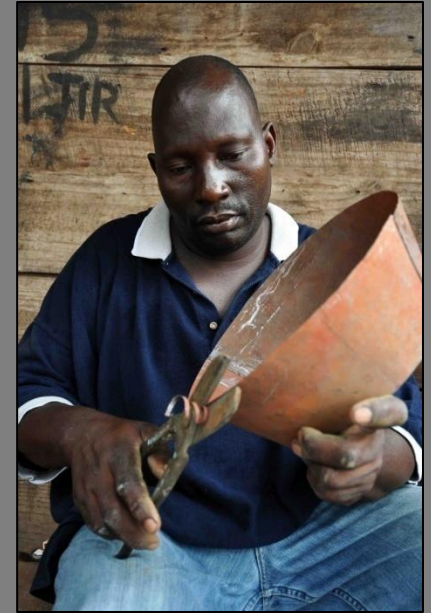
Common Charcoal “Folklore” & Realities

- 1) **Charcoal production is a major cause of deforestation**
=> charcoal production is happening in the same areas for decades
- 2) **Investments in alternative sources of energy will replace charcoal (e.g. LPG or electrification)**
=> subsidy programs have largely failed (AFR, ECA, etc.)
- 3) **Charcoal is a major contributor to GHG emissions**
=> not with life cycle analysis and sustainable management



5 Reasons for Charcoal Sector Reforms

1. Charcoal consumption will grow or remain at very high levels
2. “Alternative” sources of energy will increase in price and subsidies will continue to disappear
3. Accelerated electrification is needed, but will not replace charcoal use
4. Climate change calls for enhanced forest management: mitigation and adaptation
5. \$\$\$ needed for sustainable forest management



5 Ways to Approach to Sector Reforms

1. Formalization and Modernization of the sector
2. Consideration of the entire value chain across sectors
3. Consultations with affected stakeholders (bottom-up)
4. Integration in national strategies
5. Innovative governance arrangements (e.g. related to taxation)



5 Challenges to Sector Reforms

1. Lack of leadership
 2. Vested interests block political commitment
 3. Weak governance
 4. Forest rights & benefit sharing
 5. Forest service delivery vs. command & control
- ➔ There are no technical challenges!



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Beneficiaries of Charcoal Sector Reforms

Pre-Reform



Post-Reform

=> other indirect effects not accounted for: gas, food supply, cell phone usage

Future Outlook

Technical Level

- 3rd generation kilns
- 3rd generation cookstoves
- Outgrower schemes for wood production

Policy Level

- Wood energy integrated component of energy strategy (modern energy)
- Wood energy integrate in REDD strategies and NFP
- Innovative taxation schemes



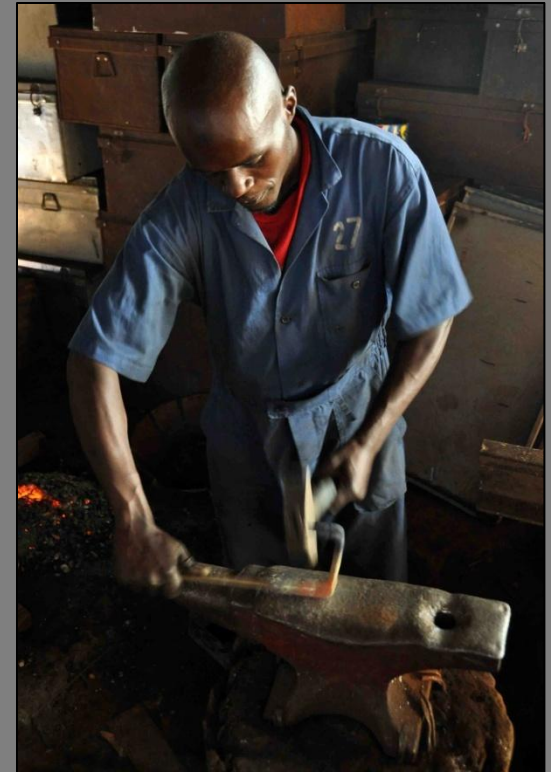
Related World Bank Activities

WBG Strategies

- New environment strategy (end 2010)
- New energy strategy (end 2010)
- New Africa region forest strategy (autumn 2011)

Operational Level

- Increased analytical and sector work
- New lending (PROGEDE II)



TF-ESSD funded Activities

Until end June 2010

- Film documentary on charcoal sector in Tanzania (joint with BNPP)
 - ➔ Swahili and English Version
- Poverty & Social Impact Analysis (PSIA) of proposed sector reforms

Until June 2011 (tentative)

- Charcoal sector factsheets for East African countries
- Life cycle analysis (incl. carbon pricing) of alternative HH fuels





Thank You !