



# Environmental Crisis or Development Opportunity?

Charcoal Sector Reforms,  
Poverty Alleviation and  
Economic Development

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**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 household energy portfolio
- Complementary to electricity access
- Increased innovation in the household energy sector
- Woodfuels as a sector of the national economy

# 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



# Urgency for Charcoal Sector Reforms

- Charcoal consumption will grow or remain at very high levels
- “Alternative” sources of energy will increase in price
- Accelerated electrification is needed, but will not replace charcoal use
- Need to cut energy subsidies and to achieve cost recovery will continue
- Climate change calls for enhanced forest management: mitigation and adaptation
- \$\$\$ needed for sustainable forest management



# Policy Approach to Sector Reforms

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- Formalization and Modernization of the sector
- Consideration of the entire value chain
- Consultations with affected stakeholders (bottom-up)
- Emphasize cross-sectoral linkages
- Integration in national strategies
- Innovative governance arrangements (e.g. taxation)



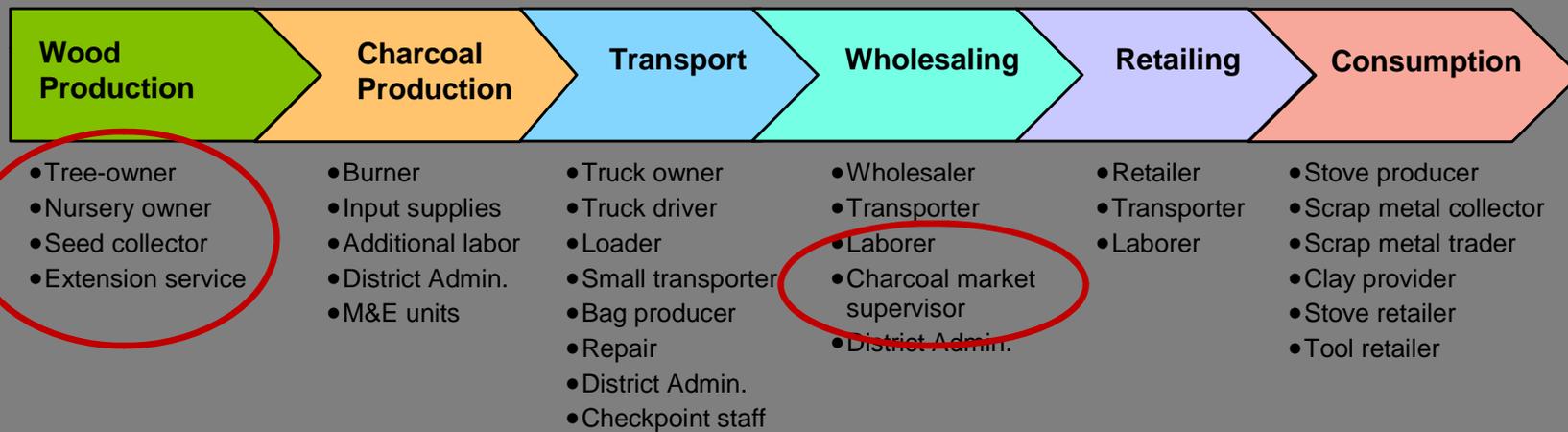
# Challenges to Sector Reforms

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- There are no real technical challenges!
- Lack of leadership
- Vested interests & political commitment
- Governance
- Forest rights & benefit sharing
- Forest service delivery vs. command & control



# Beneficiaries of Charcoal Sector Reforms



## Post-Reform

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

# 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



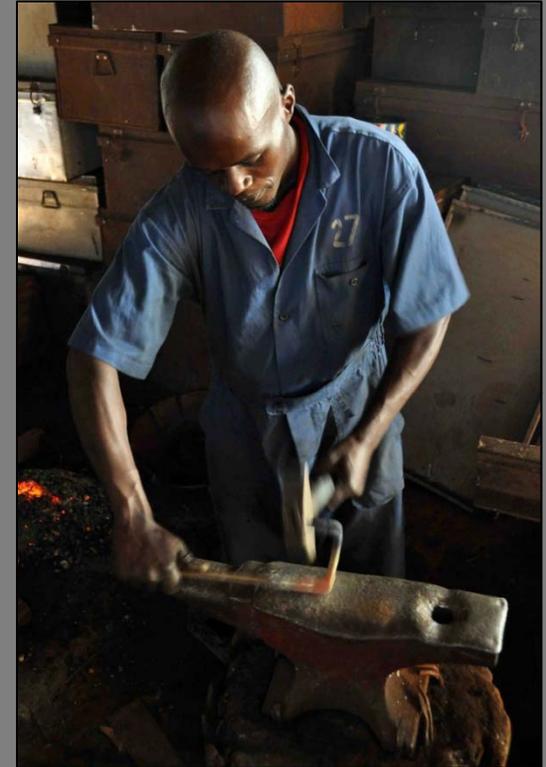
# World Bank Activities

## WBG Strategies

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

## Operational & Advisory Level

- Increased analytical and sector work
- New investment projects
- REDD & FIP
- “Lighting Africa” for HH energy





Thank You !!!