



MINISTRY OF ENERGY AND MINERALS

Tanzania's Biomass Energy Strategy (BEST): Key lessons, recommendations and the Action Plan

PRESENTATION

to the Workshop on
Transforming Tanzania's Charcoal Sub-Sector

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The Energy Sector

The Energy Sector mandate, roles and functions are under the Tanzania Ministry of Energy and Minerals(MEM)

- **These are:**
- Development of energy and mineral policies, plans and strategies'
- Oversee policy issues related to all sources of Energy including Biomass energy;
- Put the necessary institutional set-up including legal and regulatory frameworks for attaining sector goals.

Why is Biomass Energy Important?

- **Principal fuel of the rural and urban population**
- Biomass is a versatile energy source that can be used for production of heat, power, transport fuels and biomaterials, apart from making a significant contribution to climate change mitigation.
- Biomass fuel sources are readily available in rural and urban areas of all countries.
- Biomass-based industries can provide appreciable employment opportunities and promote biomass re-growth through sustainable land management practices.
- **When improved & and used more efficiently**
 - Reduces expenditure on fuel
 - Its Production, transformation & distribution generates jobs and creates micro, small & medium scale enterprises

Three Levels of biomass improvement

Traditional Biomass Energy Technologies

Inefficient use of wood, charcoal, agricultural residues, animal/human waste & urban biomass waste. Use of inefficient devices, traditional earth mound kilns.

Improved Biomass Energy Technologies

- Improved and efficient technologies for direct combustion of biomass such as improved cooking/heating stoves and improved earth mound kilns.

Modern Biomass Energy Technologies Alternatives (Kerosene & LPG)

- Conversion of biomass energy to advanced fuels/forms namely liquid fuels, biogas and electricity

Traditional Biomass

❖ Significant drawbacks

- ❖ Indoor air pollution – major health problem in dev. countries
- ❖ Environmental degradation (charcoal & deforestation)
- ❖ Social burden on women and children

❖ Challenges

- ❖ Raising policy-level awareness and commitment
- ❖ Build better database & appropriate institutions
- ❖ Ensuring biomass is sourced from sustainable biomass resources – **“tragedy of the commons”**
- ❖ More rapid substitution with improved biomass technologies

Improved Biomass Technologies

- Improved Charcoal stove-type stoves that have disseminated in various countries in Africa.
- Include efficient stoves (household & institutional), charcoal kilns
- Significant dissemination of improved biomass energy technologies in Tanzania with cost higher than traditional devices
- Successful dissemination of improved biofuel heating stoves. eg. In Arusha.

Modern Biomass Technologies & Fossil Fuel Alternatives

- **Bio fuels for transportation & stationary applications (generators, cooking, lighting, etc) eg. Multifunctional platforms by TaTEDO**
- **Bagasse-based co-generation.**
- **Kerosene & LPG – Total Woodfuel replacement**

- Challenges
- High up-front capital investment & skills intensive
- Possible loss of biodiversity and soil fertility
- Competition for land with food production

Development of Tanzania Biomass Energy Strategy (BEST)

To put the biomass sub-sector into perspective, the Government through the Ministry of Energy and Minerals in collaboration with other key stakeholders has embarked on development of a National Biomass Energy Strategy (BEST) that includes an entirely new approach in the biomass sector development.



Development of Tanzania BEST

The BEST aims at making biomass more productive and sustainable to realize more income and better living to citizens.

Development of Tanzania BEST

- ▣ The national Biomass Energy Strategy identified means of ensuring a more sustainable supply of biomass energy; raising the efficiency; promoting access to alternative energy sources and ensuring an enabling institutional environment for implementation of the agreed actions.

Development of Tanzania BEST

- ▣ The BEST Tanzania Project was designed to engage stakeholders to develop a two-year action plan to address key issues in the biomass energy sector, particularly deforestation and degradation caused by charcoal and commercial wood fuel production.

Development of Tanzania BEST

- It is anticipated that the outputs from the BEST Tanzania Project will be used primarily by All relevant stakeholders: Central and local governments NGOs and the private sector active in the biomass energy sector.

Major Issues in the Biomass Energy Sector

The main conclusion from the BEST Tanzania is that the biomass energy demand is unsustainable. Demand for wood energy has led to increasingly negative environmental, agricultural and other local and macro-impacts.

Major Issues in the Biomass Energy Sector, Cont..

Unsustainable biomass energy demand is accelerating year to year because of:-

- Perceptions that biomass energy is an inferior source of energy, synonymous with under-development;
- The priority that is accorded to biomass energy by almost all key government agencies;
- The lack of a national policy framework for biomass energy; fortunately it is well covered in the draft new NEP.
- Poor public awareness of biomass energy efficiency issues

Major Issues in the Biomass Energy Sector, Cont..

- Unsustainable biomass energy demand is accelerating year-on-year because of:-
 - Complicated, often contradictory and poorly-regulated governance of commercial biomass energy production and trade;
 - A lack of replicable examples of, or models for sustainable charcoal; and,
 - No mainstream commercially competitive biomass alternatives to charcoal and fuel wood.

Key Recommendations - BEST Tanzania Action Plan

The Action plan is anchored in three major areas

1. Coordination and management

The BEST Steering Committee (BSC) should be constituted as a standing body with an expanded mandate and support from parent agencies and development partners, to address the actions set out in the BEST Tanzania Action Plan;

Key Recommendations - BEST Tanzania Action Plan

2. **Supply side**

Supply Side (led by the MNRT, supported by the BSC)

The mandate for the Tanzania Forest Services (TFS) needs to be broadened, its budget expanded significantly, personnel recruited and other resources mobilised.

Key Recommendations - BEST Tanzania Action Plan

3. Demand Side (led by the MEM, supported by the BSC)

Simultaneously, a major, commercially-oriented, mainstream **improved cook stove programme** needs to be funded and launched, prioritizing urban households, commercial and institutional consumers, with a target of reducing urban charcoal demand by an indicative 50% by 2030

Next Tanzania BEST Steps

- **The Document is still a draft**
- **The Information available in the draft will be reorganized to finalize the Tanzania BEST Document.**



- **Thank you for listening.**