



Biomass Energy Strategy Ethiopia

Background

Ethiopia's energy sector is highly dependent on biomass (firewood, charcoal, crop residues and animal dung). It is estimated that biomass energy accounted for 89 percent of the total national energy consumption in 2010¹. About 81 % of the Ethiopian households use firewood and 11.5 % leaves and dung cakes for cooking. The growing demand for biomass together with the increased demand for agricultural output (land for crop production, livestock feed) has resulted in reduced access to wood fuels.

Ethiopia's National Energy Policy (issued in 1994) underlines the critical role of biomass energy. The successful development of the country's biomass energy resources has been hampered by a combination of factors including poor institutional framework, inadequate planning, and lack of co-ordination. There is no biomass energy strategy to direct and coordinate actions.

Strategies developed previously (Rural Biomass Energy Strategy Report, 2004, and the draft Rural Energy Strategy, 2007) have not led to the required results. The reasons were lack of ownership by key institutions and lack of a comprehensive approach. It was therefore an important objective to develop a Biomass Energy Strategy (BEST) with a strong emphasis on active involvement of all stakeholders at all stages.

Objectives

The objective of the EUEI PDF intervention was to support the Ethiopian Government in articulating a clear long-term vision for biomass energy and formulating a biomass energy strategy and action plan (BEST). The BEST shall support the Ethiopian Ministry of Energy, Irrigation and Water on national and regional level to properly manage of the country's biomass energy resources.

The specific objectives were:

- ▶ To provide a clear baseline situation of the biomass energy sector in Ethiopia;
- ▶ To analyze institutional challenges in the biomass energy sector and major trends and their implications;
- ▶ To build consensus and promote wider awareness among the stakeholders on the role of biomass energy in the country.

Country	Ethiopia
Project Partner	Ethiopian Ministry of Water, Irrigation and Energy
Project Manager	Ina de Visser
Term	August 2012 – December 2013

Activities

The project began with the inception phase during which the national policy framework was assessed and initial consultation with key stakeholders took place. This provided an indication of the role and importance of biomass energy within the national development priorities. Stakeholder consultations were held with the Regional Bureaus of Energy and Agriculture to determine the mandates and roles of the relevant institutions in relation to biomass energy. The consultations also examined the resources, expertise and capacity available in the regions. Using existing reports a general assessment was made on the main biomass energy supply and demand levels and the discernible trends nationally and where possible regionally. The desk analysis was supplemented by interviews with regional stakeholders about their perception of these trends. The inception workshop concluded the first phase.

During the second phase – baseline assessment and analysis / scenario development – supply and demand side in rural and urban areas were assessed. Several stakeholder workshops took place to identify challenges, collect experiences and discuss suggestions for strategy and action plan development. Scenario development and analysis were used as methods to identify key points for the strategy and action plan.

The following scenarios were developed and analysed:

- ▶ Scenario 1: Baseline Scenario Business as Usual (BAU) Business as Usual Scenario focuses on the household sector and represents a continuation of the status quo taking into account the phasing out of policies, population growth and income effects.

¹ Energy Sector Mapping and Database Development, Draft Ethiopian Energy Policy Framework, August 2011.



- ▶ **Scenario 2: In Compliance with Climate Resilience Green Economy (CRGE)**
The CRGE Strategies aim at achieving a middle income country status, resulting in an increase in energy consumption. Among others, the CRGE reacts to increasing demand by presenting plans to exploit the vast hydro-power potential in Ethiopia, and by promoting energy efficient cook stoves.
- ▶ **Scenario 3: In Compliance with CRGE and the best possible biomass utilisation**
This scenario is a variation of scenario 2 and takes additional measures into account. It puts a strong emphasis on the sustainable management of charcoal production and energy efficiency measures.

Based on the findings during the scenario development and the participatory consultation process, the Biomass Energy Strategy and Action Plan was drafted.

Results

The immediate result of this project has been to stimulate and encourage discussion and coordination among the involved ministries on national and regional level about the vision and the proper management of the biomass sector. The project obtained a considerable amount of new data on biomass energy supply and consumption in both rural and urban Ethiopia, which has formed a sound basis for an informed decision making process. The project has also contributed to an increased understanding of the respective roles and responsibilities of the different actors in the biomass sector, including institutions at the local level. The final result – the Biomass Energy Strategy and Action Plan – was finalized in December 2013. It contains the following aspects:

- ▶ Information about the point of departure and the methodological approach;
- ▶ Outline of the main physical, demographic, administrative, economic development and policy and institutional features of Ethiopia with regard to biomass;
- ▶ A summary of the findings of the baseline and scenario analysis focussing on biomass energy supply and demand in both the urban and rural sectors. The scenario analysis comprises a business as usual scenario

with one that examines the impact of implementing the main interventions on biomass energy supply and demand as outlined in the CRGE;

- ▶ Details on the biomass energy strategy in terms of targets and actions required beyond the biomass energy sector; and
- ▶ Details on the action plan and actions required on the demand and supply sides.

The Way Forward

As part of the activity an Action Plan was developed to offer a clear and feasible guide – for future activities for different actors from various sectors – public, private and donors. The Action Plan provides concrete ideas for activities that ultimately support the following objectives:

- ▶ Availability of biomass energy supply is sufficient to meet future energy demand.
- ▶ Efficient use and processing of biomass along the supply chain needs to be in place.
- ▶ Rural and urban households and biomass energy consuming small enterprises shall adopt use fuel efficient technologies.
- ▶ Institutional capacity to manage the biomass energy sector effectively and to implement the Strategy needs to be strengthened.
- ▶ Supportive policy and regulatory framework for biomass energy should be in place.

Some examples of the recommended activities are: Establishing an interministerial Task Force for policy, legal and regulatory review; Pilot production and test marketing of new biomass product devices such as stoves, kilns and briquette presses; conducting Consumer Needs Assessment in emerging regions (which have not given priority to in the past).

The Ministry of Water, Irrigation and Energy will be the leading agency in Ethiopia for coordinating and engaging stakeholders to implement the action plan. The strong link with the CRGE will allow the Biomass Energy Strategy and Action Plan to integrate into the CRGE and thus become part of the political framework of the country on biomass development policies and strategies.

Pictures: EUEI PDF, GIZ

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