

## **GBEP Working Group on Capacity Building for Sustainable Bioenergy**

### ***Final Report of the Activity Group 4***

### ***“Towards sustainable modern wood energy development”***

19 October 2016

#### **Background**

Wood energy makes a substantial contribution to global renewable energy and is also an important source of energy for cooking and heating in developing countries. Currently, close to 90 percent of people in the poorest countries are dependent on woodfuel for domestic purposes, and the absolute number of people relying on biomass is projected to increase from 2.6 million to 2.7 million in 2030. This raises concerns over the sustainability of the traditional use of woodfuel, due to its propensity to lead to deforestation and air pollution, with related impacts on human health, water resources, climate change, and food production and security.

However, wood energy also has the potential to produce many social, economic and environmental benefits if ‘modern’ and most efficient uses are promoted. For these benefits to be realised, the current limitations need to be overcome. These include: policies and governance; integration and cooperation among sectors; regulatory frameworks; and a holistic vision across the entire value chain. Further to this, drivers from international trade and growth of the wood energy sector in developed countries need to be considered in terms of their impact on energy access and security in developing regions.

Given this background, it is important that there is cooperation among stakeholders and sharing of experiences and best practices to promote modern wood energy. As an international forum, GBEP can provide this platform for dialogue and exchange. Although there are also large-scale uses of wood energy, it was decided that GBEP would focus primarily on the traditional use in developing countries – sustainable production and use of wood energy for household energy access and productive local uses.

An activity group under the Working Group on Capacity Building for Sustainable Bioenergy (WGCB) was proposed to address these issues. This proposal for an activity group focused on modern woody bioenergy was first discussed at the 2nd meeting of the GBEP WGCB in Rio de Janeiro on 19 June 2012. The revised scope of work was finalised on 27 November 2013. The initial activities for Activity Group 4 (AG4), outlined in the [scope of work](#), were as follows:

- to compile a stock taking paper regarding successful initiatives on solid biomass development in developing countries – including lessons learned and sustainability impacts;
- to hold a webinar to present the stock taking paper and exchange lessons learned; and
- to carry out a capacity building workshop on lessons learned.

## **Work of Activity Group 4**

The schedule of work followed the scope of work outlined above and the three main activities were carried out as envisaged, in sequence, between 2014 and 2016.

A report entitled “[\*\*Towards sustainable modern wood energy development\*\*](#)” was produced by ECO Consult and generously funded by GIZ (German Agency for International Cooperation). The report outlines the background to wood energy, including its production, uses and penetration. The report builds on the [\*\*GBEP sustainability indicators for bioenergy\*\*](#), examining specifically the wood energy value chain. Some of the economic dimensions of the wood energy value chain are outlined and the potential of the charcoal value chain, which is greater than those of the main agricultural export commodities in Africa, shows that there is large economic potential for wood energy to contribute to forest income and therefore to economic and social development. Gender considerations are also emphasised as factors that need to be examined, given the gendered roles with regard to unpaid time collecting biomass and the health impacts of traditional use. These are considerations that are also taken into account in the GBEP sustainability indicators under the social pillar.

The report investigates the main considerations within the energy wood value chain and details some of the many case studies, as well as some of the issues that need to be addressed to ensure its sustainability. These dominant issues relate to governance and include improvements required in integrating policies, coherence among policy areas, institutional setting, land tenure, regulation and enforcement. Other challenges identified in the report are lack of data, insufficient expenditures to promote sustainable modern wood energy, corruption, climate change impacts and image. The report highlights the need for a holistic approach to the ‘greening’ of the value chain in order to address problems related to policy and regulatory frameworks, and bring about structural change, along with technological advancements throughout the value chain. This holistic approach may include a differential taxation system that internalises production costs and creates incentives for sustainable forest management and efficient woodfuel use, whilst also creating a change in the image of wood energy to a commodity that can enhance sustainable development and support food security.

The report also details project case studies in five countries (Senegal, Madagascar, Chad, Brazil and Democratic Republic of Congo) in participatory forest management in order to show best practice and lessons learned.

The results of this report were articulated during both the webinar and the subsequent 6<sup>th</sup> meeting of the GBEP WGCB held in Rome 12-14 November 2014. The **webinar** was jointly organised by GBEP secretariat and GIZ and was held on 24 June 2015. The 30 participants discussed in detail the report and success stories in the wood energy sector. Some key factors were advances in technology, formalisation of the value chain by governments, interventions to support the entire value chain, combining wood energy with benefits in other sectors, and involving stakeholders in the form of cooperative groups or professional associations to enhance property and management rights. From the webinar, the benefits of collating further success stories from developing countries was recognised in order to share experiences and allow replication; as such, a dedicated workshop in Africa was suggested to facilitate this. The GBEP secretariat also agreed to circulate a standard template to collect these examples and make them available to all partners online prior to the workshop. A summary of the webinar,

along with presentations and national examples of good practice can be found on the [GBEP website](#).

The third activity of the Activity Group 4, as outlined in the original scope of work of the group, was the ***Workshop on Sustainable Wood Energy Management***, hosted by ECOWAS and held in Cotonou, Benin, 9-11 May 2016. The location of the workshop is significant, given the dependence of the region on traditional biomass and the consequent environmental and social impacts of this practice. It also reflects the commitment of ECOWAS to its Regional Bioenergy Policy and the objective to increase access to sustainable energy services. 75 participants (from the Ministries of Energy, Forestry and the Environment of the 14 ECOWAS member states, the ECOWAS Commission, UNEP, GIZ, GBEP, FAO, Civil Society Organisations, Non-governmental Organisations, Private Sectors and Research Institutions) took part in the 3-day event, with the aim to build synergies, share experiences among experts and to promote modern and sustainable wood energy management by bringing out success stories in various parts of the world. It therefore sought to provide information to, and enhance overall capacities of, relevant actors within the wood energy value-chain. The workshop consisted of five main sessions, along with discussions. These sessions focused on the opportunities and limitations to improving the sustainability of the supply chain, and included presentations that shared positive experiences and lessons learned from successful wood energy projects. The study tour of the Centre Songhai at Porto Novo, Benin, demonstrated how integrated agriculture, energy and industrial production can prove to be highly sustainable and was appreciated by all participants. The centre was a demonstrative example of how conservation agriculture and fisheries to produce food and bioenergy (from waste products) for industry can be integrated in a self-sufficient system that promotes sustainable development. The working documents and outcomes of the workshop can be viewed on the [GBEP website](#).

### **Future Prospects and recommendations**

The activities under AG4 have been highly successful in furthering analysis on sustainable wood energy. The workshop in Benin was particularly beneficial for sharing lessons learned and also examining recommendations for future topics of discussion and action. Some recommended activities include:

- a repository of knowledge on wood energy in the ECOWAS region;
- filling up knowledge gaps;
- direct exchange between countries on relevant experiences; and
- sub-regional action and coordination of activities.

The 8<sup>th</sup> GBEP Working Group on Capacity, that met in Rome in November 2016, acknowledged the work carried out by the Activity Group 4 and thanked FAO, UNEP and UNF/GACC for their leadership. Although the Activity Group 4 on sustainable modern wood energy development has completed its activities and is now closed, GBEP recognises the importance of continued emphasis on the topic of sustainable wood energy and it is suggested that the work be continued and discussions furthered in other GBEP fora. Future Bioenergy Weeks within Activity Group 3 may serve as events where this can occur, especially the forthcoming Bioenergy Week to be held by ECOWAS in 2017.