

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

### ***Draft Report on Promoting Sustainable Modern Bioenergy in West Africa***

#### **Introduction**

In May 2011 GBEP established a Working Group on Capacity Building for Sustainable Bioenergy (WGCB), co-led by The Netherlands and the United States of America, to raise awareness of the potential benefits of sustainable modern bioenergy building on the work previously developed by GBEP to facilitate collaboration among its Partners and Observers.

The purpose of this Working Group is to take a holistic approach to develop and deploy sustainable Bioenergy through partnerships and to support wider cost-effective biomass and biofuels production and utilization particularly in developing countries. GBEP promotes country-driven process that empowers countries and communities to assess local circumstances and determine domestic needs in order to establish a rational and well-thought-out modern bioenergy programme that meets nationally determined goals of sustainable development.

The ECOWAS Region, like many regions/countries, was recovering from the effects of the negative impacts of aggressive campaigns by some multilateral and national companies in 2007/2008 that resulted in the unsustainable use of some resources and the forced evictions of some farmers from their lands in Africa. In addition, population and economic growth led to increased, unsustainable use of traditional biomass as charcoal for cooking and heating, which led to significant deforestation. These factors coincided with the increases in global food prices, which were incorrectly attributed entirely to biofuels. As a result, a negative perception about biofuels developed at very high political levels in the ECOWAS Region. The situation was aggravated by the lack of understanding of sustainable bioenergy by many people in the region, including misunderstanding the broader role of sustainable bioenergy in moving the region away from the unsustainable use of traditional biomass for cooking and heating.

The negative and misguided propaganda against biofuels soon became acceptable in many capitals in the ECOWAS Region, particularly the view that biofuels/bioenergy is a taboo area for government officials. In order to help move the region forward and to tackle some of the significant challenges faced with the unsustainable uses of traditional biomass, among other factors, GBEP Partners initiated the Working Group on Capacity Building for Sustainable Bioenergy.

The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) informed the Working Group about the lack of proper understanding by many countries of the important role sustainable bioenergy can play in mitigating climate change, promoting economic growth, and enhancing food and energy security. In reality, a part of ECREEE's mission is to support the sustainable deployment of modern bioenergy in a region that is marred by widespread and unsustainable use of biomass, which is having devastating consequences on human health, the environment, and the ecology. During the GBEP Meetings in May 2011, ECREEE expressed its desire to have the intervention of GBEP and its Partners for capacity building activities in the ECOWAS region in order to initiate dialogue and peer-to-peer learning on issues of sustainable bioenergy to address important challenges.

As part of the President Obama's Blueprint for a Secure Energy Future, the Government of the United States of America partnered with the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) to form Activity Group 1 within GBEP's Working Group on Capacity Building. The U.S. Department of State provided grant funding to the GBEP Secretariat for the purpose of supporting the activities specific to this Activity Group.

With this support, Activity Group 1 was established under the leadership of the United States of America and ECOWAS/ECREEE to support capacity building programs and activities implemented by the Global Bioenergy Partnership to help officials in developing countries, particularly in the ECOWAS region, better understand how modern bioenergy can help meet nationally-defined goals of sustainable development and energy access. A series of workshops and conferences were developed collaboratively by GBEP Partners and implemented by the GBEP Secretariat to (1) promote the sustainable production and use of modern bioenergy, (2) assist countries in understanding the benefits of bioenergy resource assessments, and (3) improve the productivity of bioenergy feedstocks through better agricultural practices and increase the efficiency and output of bioenergy conversion processes.

Within this Activity Group the following activities were implemented:

1. ECOWAS Regional Bioenergy Forum, Bamako, Mali in March 2012
2. Workshop on Resource Assessment, Rome, Italy in November 2012
3. Brazil Bioenergy Week/Study Tour, Brasilia, Brazil in March 2013 – in collaboration with Activity Group 3
4. Follow-up workshop and final meeting, Berlin, Germany in May 2013

In addition, two additional activities under the auspices of other Activity Groups supported the efforts of GBEP in West Africa:

5. Piloting GBEP Sustainability Indicators, Accra, Ghana
6. Workshop on Piloting of GBEP Sustainability Indicators, Praia, Cape Verde

### **Background on ECOWAS/ECREEE**

The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) was established by Regulation C/REG.23/11/08 of the 61st Session of ECOWAS Council of Ministers in Ouagadougou, Burkina Faso, on November 23, 2008. The overall objective of establishing ECREEE is to contribute to the sustainable economic, social and environmental development of West Africa by improving access to modern, reliable and affordable energy services, energy security and reduction of energy related GHG emissions and climate change impacts on the energy systems.

The specific objective of ECREEE is to create favorable framework conditions and an enabling environment for renewable energy and energy efficiency markets in ECOWAS Member States by supporting activities directed towards overcoming existing technology, financial, economic, business, legal, policy, institutional, knowledge and capacity related barriers.

ECREEE's mandate is also perfectly aligned with the broader strategic goals of ECOWAS Vision 2020. It seeks to realize directly two of the components of this vision, namely: (1) 'A region that anchors its development on sustainable development, including agricultural and mineral resource development strategy, and on planned agricultural and industrial strategies; a region that develops its infrastructure and makes services accessible to its citizens and enterprises.' (2) 'A region that conserves its environment and resources, promotes modes of equitable and sustainable development in economic, social and environmental fields; a region which brings its contribution to bear on resolution of the common problems and challenges confronting the planet.'

In pursuing these goals, ECREEE works closely with several departments of the ECOWAS Commission, regional and international organizations including the GBEP, UNEP, UNDP, AfDB, the World Bank, CENER, etc. In pursuing its objective of promoting sustainable bioenergy in the ECOWAS Region, ECREEE requested Observer status in the GBEP in February 2011 through the ECOWAS Commission, and in May 2012, ECOWAS represented by ECREEE became a Partner of the GBEP.

## **Implementation of GBEP Activities in the ECOWAS region**

In the implementation of the GBEP activities within the Working Group on Capacity Building in the ECOWAS Region, the following activities have been successfully implemented (working documents available at [www.globalbioenergy.org](http://www.globalbioenergy.org)):

### **1. ECOWAS Regional Bioenergy Forum, Bamako, Mali**

On the 19 - 21 March 2012 the Working Group, under Activity Group 1, organized the “ECOWAS Regional Bioenergy Forum” in Bamako, Mali, in collaboration with the United States of America and the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), to initiate a regional dialogue and peer-to-peer learning to support ECOWAS Member States in developing regional and national bioenergy strategies, which will help meet energy needs and create a vibrant and sustainable modern bioenergy sector that promotes economic growth, rural development, and poverty alleviation.

This event was initiated by the Government of the United States of America in collaboration with ECOWAS/ECREEE and supported by the Governments of Brazil, Canada, and Mali, and by the United Nations Development Programme Regional Energy Programme for Poverty Reduction (UNDP), the United Nations Environment Programme (UNEP), the Global Alliance of Clean Cookstoves, and the UN Foundation.

The Forum brought together representatives of the ministries Energy, Agriculture/Forestry, and Environment of ECOWAS member states, government agencies, Partners and Observers from the Global Bioenergy Partnership, regional and international organizations, academia, business and industry, civil society and financial institutions active in the field of Bioenergy. The delegates and partners discussed and endorsed the Regional Bioenergy Strategy Framework at the end of the Forum. This Regional Bioenergy Strategy Framework was officially adopted at the 11<sup>th</sup> meeting of the ECOWAS Energy Ministers held in Accra, Republic of Ghana, on 31 October 2012.

The ECOWAS Regional Bioenergy Strategy Framework seeks to enable and promote domestic and foreign investments that help address energy poverty prevailing in the region both in rural and peri-urban populations, without compromising food security and the environment. In the implementation of this Strategy Framework, consideration will be given to local production of components/devices and fuels to spur local socio-economic development through creation of added value and employment, alongside enhancing food and energy security.

The development of a Regional Strategy for the ECOWAS Region therefore is built on the following key components:

- i) Resource Assessment, Mapping and Planning;
- ii) Policy and Strategy development;

- iii) Information and Knowledge sharing;
- iv) Capacity building and technology transfer; and
- v) Financing mechanisms and resource mobilization.

## **2. Workshop on Resource Assessment, Rome, Italy**

The workshop was held on the 13 and 14 November 2012 in Rome, Italy, under Activity Group 1 (AG1), and focused on resource assessments to promote effective policy planning for a sustainable bioenergy sector. The workshop was a follow-up to the Bioenergy Regional Forum held in Bamako in March 2012 where participants identified biomass resource assessment and mapping as an essential first step of the Bioenergy Strategy Framework.

The workshop was organized under the auspices of the Government of the United States of America and featured experts from the U.S. Departments of Agriculture and Energy, in addition to international experts from UN FAO and UNEP. The discussions focused on the latest in this field related to: (i) methodological framework for resource assessment and mapping of environmental, social and economic resources, and calculations of total available biomass; and (ii) catalogued and shared experiences on biomass use, existing resource maps, and socio-economic conditions, including methods for the allocation and tenure of land. It brought together representatives of the Ministries of Energy and Agriculture of the ECOWAS Member States, together with GBEP Partners and Observers, as well as regional and international organizations, academia, business and civil society representatives active in the region, in the field of bioenergy.

During the highly interactive Q&A session that followed this session on cutting edge technology for biomass resource assessment, the need for a simplified and harmonized tool was identified as a useful model to be applied to all countries, not only for ECOWAS but worldwide, for the assessment of the biomass resource availability.

Representatives of the ECOWAS countries gave brief presentations of their countries' efforts to assess biomass availability domestically. The main findings of this interesting set of presentations were:

- the ECOWAS countries, because of cultural and historical reasons, on average rely heavily (up to 90% of their primary energy consumption) on charcoal and wood-fuel for their energy supply;
- the energy conversion from traditional cook-stoves is very inefficient and releases large amounts of indoor air pollutants, which exposes women and children to toxic compounds;



- the high wood-fuel consumption has led to deforestation, soil degradation and other environmental issues over large expanses of many ECOWAS countries;
- policies concerning sustainable bioenergy in the ECOWAS region are beginning to appear (Regional Strategy on Bioenergy developed during the Bamako Forum was formally adopted in the ECOWAS Ministerial meeting during the last week of October / first week of November);
- reliable future projections of biomass availability are needed;
- assessment has to be done with harmonized systems; and
- food security is a key issue in the region and is connected with biomass availability.

There were presentations geared at understanding the technical aspects of biomass assessment through an in-depth description of available tools such as WISDOM and other GIS based applications, as well as the importance of ground-truthing and data verification. Many powerful tools used by international experts are freely available online (Landsat; Google Earth, etc.) but the level of expertise required for their application to biomass assessment studies is high. However, a few governments and international organizations provide free tools for bioenergy assessment. For example, FAO's Bioenergy and Food Security project presented the online operator tool for food security assessment and guided the participants through the use of this preliminary assessment tool.

In the conclusions of the workshop it was recognized to approach the issue of resource assessment in a systemic and gradual manner, given the complexity of the topic and the specific conditions of the ECOWAS region.

The representatives of all ECOWAS countries were called to take leadership in their role of ambassadors of sustainable bioenergy as a means to foster energy access and food security, and improve health condition for their citizens. Their action as catalysts of the change in the energy sector of the ECOWAS region is fundamental for achieving the goals of the Sustainable Energy for All initiative.

ECREEE expressed the need to develop capacities of the member states in various disciplines of bioenergy at both professional and academic/research levels. In this vein, ECOWAS member states requested from GBEP Partners and Observers a special programme on training and capacity building.

### **3. Brazil Bioenergy Week/Study Tour, Brasilia, Brazil**

The Activity Groups 1 and 3 of the GBEP Working Group on Capacity Building for Sustainable Bioenergy organized the "Bioenergy Week", a regional workshop that took place in Brasilia (Brazil) from 18 to 23 March 2013, with the support of the Governments

of Brazil and the United States of America, as well as of the Organization of American States. It was aimed at fostering sustainable bioenergy deployment, particularly in developing countries where biomass use is prevalent. The workshop consisted of training sessions with specific themes of sustainable production and use of bioenergy and effective enabling policy frameworks, taking into account the GBEP work on sustainability indicators. The workshop aimed at fostering exchange of information, experience, skills and technologies through bilateral and multilateral collaboration.

ECREEE and 12 ECOWAS government officials participated in the Bioenergy Week together with scientists and officials from the United States of America, West Africa, Latin America and the Caribbean, as well as Southeast Asia. Participants were invited to facilitate information sharing to improve overall agricultural productivity, yield efficiency, and infrastructure logistics so that more feedstock is available for food, feed, fiber, and fuel. Through exchanges of technical information and tools for identifying, measuring and reducing costs, and raising efficiency, countries may identify opportunities for improving feedstock productivity and logistics and areas for continued technical support.

The workshop contributed to train developing country officials and stakeholders on ways to improve agricultural productivity and yield, to enhance feedstock logistics, and to increase the use of modern conversion technologies. It also provided an opportunity to learn and experience from the sustainable interventions of Brazil in the field of bioenergy. Participants had the opportunity to visit a research facility, along with a bioenergy processing plant producing biodiesel in the general vicinity of Brasilia.

#### **4. Follow-up workshop and final meeting, Berlin, Germany in May 2013**

The Activity Group 1 organized an additional meeting in Berlin on 29 May 2013. This meeting allowed government representatives of the ECOWAS member states to provide updates on their engagement with GBEP's capacity building activities, specifically to promoting sustainable modern bioenergy and improved agricultural productivity. In particular, eight ECOWAS representatives presented their country's efforts in moving forward with developing a sustainable bioenergy sector. Representatives identified the need for effective policy and institutional frameworks in the region, particularly with a view to attracting needed investments in the sector. In this regard, continued cooperation with GBEP was identified as an important element in the sustainable development of modern bioenergy in the ECOWAS region.

#### **5. Piloting GBEP Sustainability Indicator, Accra, Ghana**

The GBEP indicators were tested in the Ghanaian context to establish their feasibility and enhance their practicality as a tool for policymaking. The Pilot Study was funded by the Government of the Netherlands, under the framework of Activity Group 2.

The main aims of this project were to:

- I. Enhancing the capacity of the host country (and ECOWAS) to use the GBEP indicators as a tool for assessing the sustainability of its bioenergy sector and/or developing sustainable bioenergy policies.
- II. Learning lessons on how to apply the indicators and how to enhance their practicality as a tool for policymakers and giving this as feedback to the GBEP community.

The pilot project was implemented by Partners for Innovation of The Netherlands in Ghana, in cooperation with the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) in 2012 and the Energy Commission of Ghana with its collaborating institutions. In the implementation of the study, the selected Indicators were studied based on national circumstances.

Under the Environment Pillar, four indicators (1 GHG emissions, 2 Soil quality, 3 Harvest levels of wood resources and 8 Land use change) were considered for the pilot study given the availability of relevant data and within the limits of time and resources available for the study.

Under the Social Pillar, three indicators (10 Price and supply of national food basket, 12 Jobs in bioenergy sector and 14 Bioenergy used to expand access to modern energy) were selected for assessing the social pillar of the GBEP pilot study. In some instances methodologies used to collect data for indicators were not fully in line with GBEP methodology.

Under the Economic Pillar, 4 indicators (17 Productivity, 18 Energy balance, 20 Change in consumption of fossil fuels and traditional use of biomass and 23 Infrastructure and logistics) were selected, with 36 sub indicators implied.

During the Study only the existing or primary data were used. No actual measurements, tests or surveys were carried out. The data gathering approach was conducted through interviews with relevant ministries, industry association and desk studies.

The conclusion of the Study emphasized the value of the pilot for Ghana and how it facilitated the discussion and cooperation between policymakers and researchers. It also stressed the importance of starting with the indicators in a simplified but structured manner and that a full-fledged implementation of the indicators in Ghana would require significant time and resources but is currently not necessary, given the immaturity of the bioenergy sector.



### *Conclusions of the pilot testing in Ghana: Technical aspects*

#### On data availability:

- Secondary data related to bioenergy production and use is scarce in Ghana. Bioenergy sectors in many African countries including Ghana are relatively new. This does not mean that the Sustainability Indicators (SI) are not relevant or applicable in those countries, but that more work needs to be done to gather relevant data in the sector to guide and inform policy development of the bioenergy sector.
- The pilot study has enabled gaps to be identified and has given a better understanding on how to conduct a holistic study.
- Data collection on sustainability of the bioenergy sector can be guided by national governments and represent a pre-phase to every SI pilot study. In addition a data collection strategy for each indicator and sub-indicators should be agreed with relevant national stakeholders in the initial stages of the pilot testing.

#### On GBEP SI indicators:

- The pilot testing of the GBEP Sustainability Indicators was very important for Ghana. The indicators provide very sound, fundamental and comprehensive framework for bioenergy resource measurement, monitoring and management.
- The Ghanaian experience with the GBEP SI has offered important information that will enhance a practical and feasible implementation of the SI.
- The SI has fostered closer links between relevant institutions in Ghana. In the future this will minimize the problem of uncoordinated and fragmented data gathering efforts and ensure better synergies in data gathering and information sharing among sectors.

### **6. Workshop on Piloting of GBEP Sustainability Indicators, Praia, Cape Verde**

The workshop was held on 7 and 8 November 2013, with the support of the Government of the Netherlands, as a means of disseminating the results of the pilot project on the GBEP SI indicators in Ghana. Specifically the workshop provided information to the ECOWAS member states on GBEP, its activities, the Sustainability Indicators and the benefits of these indicators. It also allowed the sharing of the results of the Pilot Study of the GBEP Sustainability Indicators with the national focal points and other staff from the Ministries of Energy in the ECOWAS member states, with a view to stress the usefulness in assessing the sustainability of bioenergy development in various regions. There were presentations on the indicators selected for each pillar and the methodology used, especially with regards to data gaps. There were discussions that clarified a host of issues raised. Finally, there were also presentations on the

lessons learned, conclusions of the Pilot Project and its implications for Ghana and the Region.

At the end of the Workshop, the following conclusions were reached:

- i) The cooperation between ECREEE and GBEP has yielded fruitful results:
  - Capacity building program of GBEP in West Africa under Activity Group 1
  - ECOWAS Regional Bioenergy Strategy
  - Piloting of GBEP SI in Ghana
- ii) The dissemination of the results of the pilot testing of the GBEP SI in Ghana funded by the Dutch government has raised interest among many ECOWAS member states.
- iii) The SI provides opportunities to incorporate some sustainability aspects of the indicators to the bioenergy sector. However the full implementation of the 24 indicators was considered challenging in terms of feasibility (from a time and resource point of view).
- iv) In the implementation of the indicators there are opportunities and challenges-difficulties. This however provided opportunities for innovative approaches to problem solving.
- v) Since data availability was a major constraint in the Ghana pilot, countries should therefore buttress the need to start collecting relevant data required that can be adapted to the GBEP SI indicators.
- vi) The Ghanaian experience revealed the challenges and opportunities of pilot testing the GBEP SI; however the SI provided sound fundamental and comprehensive framework for bioenergy resource measurements and assessment.

The following recommendations were agreed:

- i) Improve the policy and regulatory frameworks especially with regards to improving data collection particularly from local entrepreneurs in the bioenergy sector.
- ii) There must be firm governmental/institutional support. Institutions should endeavor with government intervention to improve data collection and establish data banks for bioenergy resource assessment.
- iii) There is a need for collaboration between stakeholders for effective sharing of knowledge, information and efficient implementation of the sustainability indicators.
- iv) GBEP is invited to provide technical backstopping to take the pilot project team through SI prior to the implementation of the project.
- v) Simplistic approach for data gathering of SI should be used for countries that have limited resources.

- vi) In implementing SI, prioritization of indicators could be done as a first step to learn through the process.
- vii) A GBEP SI expert exchange platform at both technical and policy levels would be useful. GBEP has recently developed an e-forum for this purpose and participants were invited to make best use of it.
- viii) Participants were called upon to bring the aspect of sustainable bioenergy to the attention of their Ministers.

### **Feedback from the ECOWAS Member States on the GBEP interventions under the Working Group on Capacity Building for Sustainable Bioenergy**

After almost three years of ECREEE's participation in the GBEP activities to introduce sustainable bioenergy in the region, the reactions of ECOWAS member states were solicited and compiled. The issue of bioenergy, often confused with misconceptions associated with the alleged link of biofuels and the increase in global food prices in 2008. Under the Activity Group 1 of the Working Group on Capacity Building (WGCB), the ECOWAS Region was accorded priority to overcome negative misconceptions and to build capacities of member states through sharing of information and implementing discussions and peer-to-peer learning processes. As indicated above, very successful activities were organized and implemented under the leadership of the Government of the United States of America and the ECOWAS/ECREEE and through the efforts of GBEP Secretariat and key Partners and Observers.

To get the feedback of the member states, a questionnaire was designed by ECREEE, U.S. Department of State, and the U.S. Department of Agriculture and sent to the various ECREEE Focal points in the ECOWAS region. The questionnaire centered on the intervention of GBEP activities on bioenergy in the region and trying to understand the awareness of bioenergy among policy makers and other stakeholders before and after the intervention. Other aspects such as the effects of bioenergy development on the various national economies, agricultural production, environment and rural development were assessed. A summary of the responses collated is presented below.

#### *Responses from the region:*

Though the responses collated were varied and mixed, a few of the countries indicated that policy makers had an initial knowledge of potentials in bioenergy as an alternative source of energy. However, efforts at promoting bioenergy (sustainable production and use) in the general energy mix of the various countries have not been advanced by most of the national governments of the countries in the ECOWAS region or by private sector initiatives, generally due to lack adequate knowledge and information. Statistical information on consumption of fuelwood (firewood and charcoal) was provided by some countries, elaborating their understanding of bioenergy use as fuelwood and/or biofuels only.

The general information from many of the responses was that the implementation of GBEP activities had positive impacts in the region and these included awareness raising and increased knowledge on bioenergy to levels higher than what they were hitherto. Other issues raised in the responses covered the following fields:

- i) National policies and strategies for bioenergy development have not been promoted by the various governments;
- ii) No clear positive or negative experiences have been recorded on the impact of bioenergy on food security, environment and rural development. However, some of the responses acknowledged the need to integrate social, economic and proper agronomic practices to the development of bioenergy in order to ensure food security, environmental and ecosystem management and rural development.
- iii) Most countries expressed their appreciation in participating in the GBEP meetings that helped them develop the capacities of the countries;
- iv) A few of the countries indicated past experiences on bioenergy and cited the following as the causes of negative impacts on the environment and ecosystem management:
  - Over exploitation of the country's wood resource for woodfuel production;
  - Use of inefficient traditional kilns for the production of charcoal;
  - Use of inefficient woodfuel cookstoves;
  - Lack of standards for improved cookstoves and charcoal kilns;
  - Lack of testing facilities for improved cookstoves;
- v) The awareness raised has led to efforts in some of the countries to promote the development of bioenergy as an alternative source of energy. The GBEP intervention in the bioenergy sector of the various countries through the strong support of ECREEE, the United States of America, and the Netherlands has also recorded positive impact among which the following were cited:
  - Awareness is increasing gradually in some countries. While some have strategies and a few countries are developing policies of bioenergy, others believe their national energy policies do not adequately reflect bioenergy and require better reflection;
  - It is now understood throughout the West African region that with right policies in place, bioenergy can enhance food security, increase access to energy services and bring about rural development;

- Some believe that it is possible to plan the development of bioenergy and guide the policy and regulatory framework by taking into account the GBEP Sustainable Indicators;
- Through the efforts of the Global Alliance for Clean Cookstoves, a regional cookstoves testing center was established in Accra, i.e. Council for Scientific and Industrial Research, CSIR in Ghana;
- Drafting regulations for sustainable development and management of fuelwoods to be passed into legislative instrument is being undertaken in Ghana. Ghana already has a draft bioenergy policy and the Environmental Protection Agency and other stakeholders are conducting Social and Environmental Assessment of this Policy, as a result.

## Conclusions

Generally, the GBEP interventions in the ECOWAS region with the critical support and participation of ECREEE has raised the awareness of the potentials of sustainable bioenergy in the region. While some governments are moving forward in a positive and productive manner with developing policies that promote sustainable modern bioenergy production and use, other governments, however, have not advanced bioenergy policies to any appreciable extent. The ECOWAS regional bioenergy strategy seems to be a clear path towards the promotion of the development and use of the sustainable bioenergy in the region.

What seems clear is that all countries are struggling with the challenge of using sustainable fuels for clean cooking and a few countries are stuck in the past with a biofuels “syndrome” that still focuses more on biofuels than embracing a holistic approach to developing sustainable modern bioenergy. While bioenergy is broader in scope and coverage, biofuels is restricted to only liquid fuels that a few countries still promote. As some of the countries move forward, there is hope that the development of the ECOWAS Regional Bioenergy Policy would add value in bringing greater awareness and understanding of the subject throughout the region.

The initiatives and activities under the GBEP Working Group on Capacity Building represent a productive series of engagements in the West Africa region. While the work has helped move the discussion forward in a positive manner, more work needs to be done to continue the momentum, particularly with regard to developing policy, regulatory, and business frameworks that promote the transition away from the unsustainable use of traditional biomass towards more sustainable modern bioenergy.

Under the leadership of the Government of the United States and the ECOWAS/ ECREEE and through the framework of Activity Group 1, GBEP Partners and



Observers were also able to educate policy makers and public stakeholders in relevant countries on the benefits and challenges of modern bioenergy production and use; provide technical expertise on methods and means to conduct bioenergy resource assessments; provide advice on agricultural methods and feedstock conversion technologies that countries can use to optimize the productivity of country-specific bioenergy feedstocks; and create opportunities for synergy between the work of U.S. institutions, regional groups, and international organizations to promote sustainable production and use of modern bioenergy. Additional work should be done in all areas, including a focus on developing additional capacity on resource assessments.

The GBEP activities in the ECOWAS Region represented a contribution to the UN Sustainable Energy For All (SEFA) initiative.