



WORKSHOP REPORT

ECOWAS Workshop on Sustainable Wood Energy Management

(GBEP Activity Group 4)

Cotonou, Benin, 9-11 May 2016

The workshop held within the ECOWAS Biomass Actions in REDD+ will contribute to the ECOWAS Bioenergy programmes and the implementation of the West Africa Clean Cooking Alliance (WACCA) Regional Action Plan

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This event will be organized within the scope of the



1. INTRODUCTION

The energy access situation in the ECOWAS region continues to be characterised by heavy dependence on traditional biomass and fossil fuels with negative consequences on the environment, health and socio-economic aspects. According to the energy balance of the region, almost 80% of the total energy consumption comes from traditional biomass, the harvesting and use of which are very unsustainable. This contributes to smoke-related health problems, deforestation and desertification and correspondingly affects water resources, food production and security and climate change impacts. In view of this, ECREEE with the support of UNDP formulated an elaborate Regional Bioenergy Policy which was validated by ECOWAS Member States in October 2015 in Dakar. Out of this policy, an elaborate Bioenergy Programme is being unrolled. The overall objective of the ECOWAS Bioenergy Program is to increase access to sustainable energy services through the deployment of sustainability criteria in the production, transformation and utilization of biomass resources without compromising the ecosystem, biodiversity and food security.

ECOWAS Biomass Actions in the form of REDD+ is being implemented by ECREEE as part of the bioenergy programme. As part of the recommendations from one of such activities in Niamey, Niger (Sustainable Management of Forest workshop) in April 2015, ECREEE and GBEP agreed to work in partnership to further the cause of promoting sustainable wood energy management, within a logical collaboration, considering that GBEP already has an Activity Group (Activity Group 4 or AG4) under the Working Group on Capacity Building (WGCB) for Sustainable Bioenergy, dedicated to this topic.

The purpose of the workshop was to build synergies, share experiences among the two institutions' expert groups and to promote modern and sustainable wood energy management by bringing out success stories in various parts of the world. Within the domestic energy sphere, efficient and clean cooking energy devices (e.g. cook-stoves) and other forms of bioenergy such as bioethanol, biogas and briquettes exist. However, they are either not being produced by efficient methods or getting the necessary patronage by the people who need them the most as a result of several barriers. It is in this vein that, this workshop is seen as timely, opportune and highly necessary to the ECOWAS community.

2. OBJECTIVES OF THE WORKSHOP

The overall objective of the workshop was to provide information to and enhance overall capacities of relevant actors within the wood energy value-chain.

Specific objectives were:

- Discuss the present state of art with regard to the unsustainable use of wood fuels and how to introduce sustainability in its value chain;
- Sensitize and enhance capacities on shifting to and expanding the sustainable use of wood fuels by incorporating efficient and modern approaches in the entire value chain for other productive sectors of the economy;
- Peer-to-peer learning and sharing of positive experiences on successful wood energy projects, including modernization and sustainable production, transformation and utilization for replication; and
- Inform and discuss integration of alternative cooking fuels into national energy policies and strategies, since linkages between clean cooking and sustainable supply of woody biomass are undeniable.

3. PARTICIPANTS

- The workshop was attended by participants (national representatives 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 reputable Research Institutions.
- About 75 participants took part in the 3-day event comprising 2 days workshop and 1 day field trip. The list of participants is attached to this report as Annex 1.

4. OPENING SESSION

The workshop was officially opened by Mr. Christophe KAKE, Permanent Secretary at the Ministry of Energy, Water and Mines of the Republic of Benin representing the Hon. Minister while the keynote speech was delivered by Mr. Theophile KAKPO, Director General of Forest, representing his Hon. Minister who provided participants with a background on

the state of sustainable energy access in the ECOWAS region, highlighting the peculiar challenges with wood energy management along its value chain. Mr. Kakpo particularly noted that, the demand for household energy from wood in Benin is ever increasing which is leading to ecological imbalance. Both speakers recognized the need for regional intervention in the wood energy sector, giving the significant role this energy resource plays in the socio-economic development of the people in the region. They therefore welcomed the organization of the workshop in Benin, giving that 90% of the population depend on wood energy to meet their daily energy needs and expressed their appreciation to ECREEE for selecting Benin for this workshop.

In her Opening Speech, **Dr. Maria Michela Morese**, Executive Secretary of the Global Bioenergy Partnership noted that, bioenergy offers a lot of possibilities to mitigate climate change and advance energy access in a region like ECOWAS. She reiterated how transition to more sustainable biomass energy could lead to food and energy security, and improvement of health conditions of local communities.

Mr. Karl Moosmann of GIZ lamented why tools and methodologies which when put together could guarantee wood energy sustainability are not harmonized and utilized. He therefore informed the house of the commitment of the German government to processes for developing energy access through REDD+ and Forest Land Scape Restoration (FLSR). He further informed that, it is the aim of the government of the Republic of Germany to support the revamping of 150 million ha of degraded lands in Africa with GIZ support.

Earlier, Mr. Bah F. M. Saho, representing the Executive Director of ECREEE (Mr. Mahama Kappiah) gave a recount of the efforts of ECOWAS in providing sustainable energy access. He noted that, wood energy management is a topical issue in the West African region as indicated by participants to this workshop. He further lamented that, though about 80% of the region's energy needs come from woody biomass, the harvesting of the wood, transformation and utilization still remain highly inefficient. He recognized the efforts by ECREEE to facilitate the development and dissemination of clean and efficient cooking through the regional initiative- WACCA. Finally, Mr. Saho called on all participants to come

out with recommendations to help bring solutions to the energy access situation in the region.

5. AGENDA

The concept notes and Agenda is attached as Annex 2 to this document.

6. CONDUCT OF DELIBERATIONS

The workshop was divided into 5 sessions as follows:

- i. Institutional framework for sustainable wood management cases;
- ii. Image changes;
- iii. Wood energy sector formalization
- iv. Successful financial mechanisms and business plans for sustainable wood energy value chains and
- v. Promotion of wood energy value chain approach

DAY ONE (1)

6.1. Opening the deliberations

Opening the deliberations of the workshop, Mr. Olivier Dubois of the FAO, noted that, contrary to the general belief, wood energy is not the energy for the poor. It is traditionally the ideal source of energy for food preparation for both the rich and poor in developed and developing countries. He went further to give insight and background of the GBEP Activity Group 4 (AG4), noting that, the GBEP Activity Group 4 focuses on wood energy for household needs and uses.

The ECOWAS Bioenergy Policy and the accompanying programmes were presented by ECREEE. The objectives, rationale, achievements, components, focus of operation and the expected impacts of the bioenergy policy and programmes were explained during the presentation.

6.2. Session 1: Institutional framework for sustainable wood management cases

This session had eleven (11) presentations altogether. The background work of GBEP Activity Group 4 (AG4) was succinctly delivered by Olivier DuBois of the FAO. This brief presentation dwelled on the rationale, goals and objectives of the AG4 in line with sustainable wood energy production and management along the value chain.

Six country case studies on sustainable management of forest were presented involving Nigeria, Cote D'Ivoire, The Gambia, Mali, Burkina Faso and Guinea. In these presentations, the current state of forest, exploitation and utilization, policy and regulatory framework and management practices in each country formed the main highlights for the presentations.

6.3. Session 2: Image Change

The options for an image change: how to profile wood energy as a renewable, modern and profitable energy source formed the main theme for this session. Two country case studies on legal and regulatory experience on export of wood products from Ghana and fiscal incentives covering the trade in the wood energy value chain from Niger were presented. In both presentations, the challenges associated with legal and regulatory measures were highlighted. In both presentations, it was made known that, wood energy exploitation has been found to cause forest degradation and deforestation. Irrespective, the people who depend on the activities of the wood energy value chain have always been hesitant to accept the regulatory measures.

The workshop participants were introduced to the technologies for sustainable utilization of wood energy options, in this case, pyrolysis or gasification for modern and efficient cookstoves and using of groundnut shell briquettes by Dr. Giorgio Alberti of Udine University-Italy and Mr. Kemo Ceesay of The Gambia.

6.4. SUMMARY OF DAY ONE ACTIVITIES

The presentations and deliberations that followed in day one could be summarized as follows:

- **Benefits and challenges from wood energy:** Usual ones (access to modern energy), Rural Development (Jobs, Income), Climate change (mitigation, pollution,

adaptation/resilience) and Climate funds, Health, No benefits for villagers and governments if informal;

- **Formalizing and scaling up of wood energy:** Need right policies, regulations and institutions, ensuring implementation and enforcement of regulations and institutions, ensuring mutual benefit for everybody in the chain; making activities sustainable, balance benefits with rights and responsibilities, the balance of rights, responsibilities, returns and revenues both within and between stakeholders must be guaranteed;
- **Alternatives to woodfuel that combine energy and agriculture:** Technological innovations specifically discussed that can provide alternatives include; Peanut shells into briquettes, Energy and Biochar from pyrolysis of crop and wood residues, Biogas: Not feasible at household level for West Africa + a lot to learn from the region, in particular from Ghana.

DAY TWO (2)

6.5. Session 3: Wood energy sector formalization

Following the summary of the previous day's presentation and activities, the first session of day 2 covering session three of the programme concentrated on the overview of effective systems for the formalization of the wood energy sector. The workshop participants were introduced to experiences from Kenya and Senegal by respectively, Dr. Linda Davis (private consultant) and Mr. Mamadou Fall (Department of Forestry of Senegal). The session was concluded with a presentation on PROGEDE2 which features the activities of the government of Senegal towards sustainable management of forest and the general wood energy management in Senegal.

6.6. Session 4: Successful financial mechanisms and business plans for sustainable wood energy value chains.

The afternoon programmes of day 2 which commenced with session 4 of the workshop were used to showcase successful financial mechanisms and business plans for sustainable wood energy value chains. The participants were introduced to existing financial mechanisms and opportunities in the wood energy sector, the existing finance models for

clean cookstoves and potential for innovative action instruments to deliver climate financing as well as the opportunities from the Green Climate Fund (GCF).

6.7. Session 5: Promotion of wood energy value chain approach

Rationale for the promotion of a comprehensive approach to regulating and managing wood energy value chains was discussed with three country case studies from Ghana, Madagascar and Kenya. There were a lot of synergies in all the presentations showing that, the wood energy access (exploitation and distribution) are similar across Africa. The three presentations all pointed to the need to streamline the management strategies for sustainability.

7. SUGGESTED NEXT STEPS AND RECOMMENDATIONS

- i. **Repository of knowledge on wood energy in the region** could be found in ECREEE (ECOWAS Observatory). Possible topics that could be accessed include: Technological aspects of wood energy, Financial aspects (business plans, funding schemes (grants/loans), benefits to who, Integrated food energy systems, Successful policies; regulations, institutional set ups, Tools/Approaches and biogas systems;
- ii. **Typical examples of wood energy management and experiences in the region:** Decentralized wood energy production - Rural fuelwood markets (Niger and Mali), Management principles of PROGEDE (Senegal) and Community forestry in The Gambia, Process to develop bioenergy policy in Ghana;
- iii. **Filing up knowledge gaps:** Links between agriculture and wood energy have to be explored to encompass the water-energy-food nexus, comparison between forest areas “moving sources of feedstock”, competing use of agricultural residues (between soil management, animal feed and bioenergy – FAO tools can help) and land restoration.
- iv. **Direct exchange between country participants on relevant experiences:** Technological aspects, Non-smoking wood energy from peanut shell between – The Gambia and Benin, What species to plant – Ghana, Senegal and Liberia, Regulations on charcoal export - Ghana and Benin, Decentralized forest management plans (Senegal and others), Revenue sharing (including gender aspects – Mali, Senegal, Niger) and Decentralised M&E (Senegal, Niger, Mali)

- v. The need for sub-regional action and coordination of activities, increase better contacts between countries to share experiences, role interface to ECREEE, enhance country groups of initiatives (e.g. great green wall, Africa Renewable Energy), better information on carbon credit concerning the improved stoves and information on the purchase value of the timber by the operator.
- vi. Explore ethanol stove as alternative option to reduce demand for woodfuel and catalogue best practices along the value chains, caution in quest for new technologies - need to be appropriate and acceptable and formalization of woodfuel industry (e.g. standards, packaging, proper transportation)
- vii. ECREEE should accelerate the adoption of energy-wood strategy, ensuring the existence of action plans, countries to take caution in charcoal export - Need to balance it with domestic needs, put consequential damages means for substituting wood to reduce pressure on wood resources, ECREEE should be more aggressive in its visibility (e.g. large international meetings to advocate for the wood-energy management).

8. FIELD TRIP TO THE SONGHAI CENTRE

The third day of the workshop was devoted for a study tour to the Centre Songhai at Porto Novo, in Benin. The participants to the workshop were taken to the centre which boasts of being a center of excellence for sustainable biomass systems for production, transformation and utilization in wood energy, biochar systems and biogas. The participants, grouped into French and English speaking were taken through all the stages in the production systems at the Centre.

The systems comprise agriculture production (crops, fisheries, animals and irrigation systems), biomass for energy production (biogas) and syngas (for electricity generation) and biochar production through gasification in a process of thermo-chemical biomass refinery. Other areas of the system include services and industries (mechanical workshop, fruit juice production, filtered water production, soap and cream production). This integrated agriculture, energy and industrial production proved to be highly sustainable and was appreciated by all participants.